

#### **VIA ELECTRONIC MAIL**

April 28, 2015

Mr. Alexander Wardle Virginia Department of Environmental Quality Northern Regional Office 13901 Crown Court Woodbridge, Virginia, 22193

RE: First Quarter 2015 CAP Monitoring Report

Inactive Fairfax Facility # 26140

9901 Georgetown Pike

Great Falls, Fairfax County, Virginia

PC# 2010-3028

Dear Mr. Wardle:

Kleinfelder, on behalf of Fairfax Petroleum Realty, LLC (Fairfax), is submitting this Corrective Action Plan (CAP) Monitoring Report for the above-referenced facility. This report outlines the activities completed during the First Quarter 2015.

Fairfax Petroleum and Kleinfelder appreciate the continued guidance of the DEQ in the successful completion of this project. Please feel free to contact us at (410) 850-0404 should you have questions.

Sincerely,

**KLEINFELDER** 

Paxton Wertz

Geologist

Mark C. Steele

Senior Program Manager

Made C. Ville

Attachment

cc: Ms. Megan Tingley - Fairfax Petroleum Realty, LLC



# CAP MONITORING REPORT – FIRST QUARTER 2015 INACTIVE FAIRFAX FACILITY # 26140 9901 GEORGETOWN PIKE GREAT FALLS, FAIRFAX COUNTY, VIRGINIA

#### **REGULATORY INFORMATION**

Regulatory Agency: Virginia Department of Environmental

Quality (DEQ)

Agency Contact: Mr. Alexander Wardle

Pollution Complaint No.: 2010-3028

Current Case Status: Corrective Action Plan (CAP)

Implementation

Reporting Period: October 1 through December 31, 2014

Last Report: CAP Monitoring Report (CMR),

January 30, 2015

#### **GENERAL SITE INFORMATION**

Fairfax Petroleum Realty Contact: Ms. Megan Tingley
Consultant Contact: Mr. Mark C. Steele

Facility Status: Inactive retail service station with auto

repair facilities. The UST system was

removed in August 2012.

Area Property Use: See Local Area Map (**Figure 1**)

Site Well Network: MW-1 through MW-3, MW-5, MW-6S,

MW-6D, MW-7, MW-9 through MW-20D, MW-21I, MW-21S, MW-22, MW-23D, MW-24, W-1 through W-7, PW-1,

and RW-1 (Figure 2 and Table 1)

Soil Vapor Monitoring Points VP-1, VP-2S, VP-2D, and VP-3

Site Geology: Schist saprolite grading to competent

schist bedrock

Groundwater Flow Directions: Southeast / South

#### **ACTIVITIES COMPLETED THIS PERIOD**

#### Monitoring, Bedrock, and CMT Well Gauging and Sampling

Groundwater gauging and sampling was conducted on the Site monitoring well network, including open bedrock wells and the continuous multichannel tubing (CMT) well, during the First Quarter 2015. Groundwater gauging was conducted during the sampling event and as an independent activity to monitoring static groundwater elevations. The gauging data used to generate potentiometric surface maps is included as Table 2 and depicted on Figures 3 and 4. Monitoring wells were purged using the low flow parameter stabilization sampling methodology with a submersible electric pump and a YSI, Inc. (YSI) multi-parameter water quality meter. Groundwater samples were submitted under chain of custody protocol to Lancaster Laboratories for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tertiary butyl ether (MTBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), ethyl tertiary butyl ether (ETBE), and di-isopropyl ether (DIPE) using EPA Method 8260B. A summary of groundwater analytical results is presented in Tables 3 and 4 and are included on Figures 3 and 4. A summary of monitoring and natural attenuation parameters collected during sampling is presented in **Table 5**. The Lancaster Laboratories Analysis Reports for the groundwater sampling event are included as **Appendix A**.

A summary of the gauging and sampling conducted during the First Quarter 2015 is provided below.

February 11, 2015

Wells Gauged: MW-5, MW-6S, MW-6D, MW-9, MW-10, MW-

> 16D, MW-18D, MW-19D, MW-20D(73-83), MW-20D(90-100), MW-20D(132-142), MW-21S, MW-21I, MW-25D, MW-26D, MW-27S, MW-27I, PW-1, RW-1, and W-1 through W-7

Minimum/Maximum Depth to Water: 2.32 (MW-26D) / 51.84 (RW-1) feet

Shallow Groundwater Flow Direction: Radially towards RW-1 MW-16D: and

Southeast / South

Shallow Hydraulic Gradient: 0.072 ft/ft between W-1 and RW-1

Deep Groundwater Flow Direction: Radially towards RW-1 and MW-16D;

Southeast / South

Deep Hydraulic Gradient: 0.059 ft/ft between MW-20D(73-83) and RW-1

March 9 through March 12, 2015

Wells Gauged and Sampled: MW-1, MW-15, MW-16D, MW-17D, MW-

> 20D(73-83), MW-20D(90-100), MW-20D(132-142), MW-21S/I, MW-23D, MW-24, MW-25D, MW-26D, MW-27S/I, PW-1, RW-1, W-1, W-2,

W-6, and W-7.

Wells Gauged Only: MW-2, MW-3, MW-5, MW-6S/D, MW-7, MW-9,

> MW-10, MW-11, MW-13, MW-14, MW-18D, MW-19D, MW-22, SVE-2, W-3 through W-5

Minimum/Maximum Depth to Water: 1.97 (MW-26D) / 51.28 (MW-16D) feet

Shallow Groundwater Flow Direction: Radially towards RW-1 MW-16D; and

Southeast / South

0.061 ft/ft between W-1 and RW-1 Shallow Hydraulic Gradient:

Deep Groundwater Flow Direction: towards RW-1 MW-16D; Radially and

Southeast / South

Deep Hydraulic Gradient: 0.046 ft/ft between MW-20D(73-83) and RW-1

Select wells in the Site monitoring well network were gauged on February 11, 2015 and March 12, 2015 to evaluate the effect of pumping from the extraction wells MW-16D and RW-1 on the deep and shallow portions of the aguifer. The results of the gauging are included on **Table 2**. The shallow and deep potentiometric surfaces for March 12, 2015 are included on Figures 3 and 4; respectively. During the March 2015 monitoring well gauging event, monitoring wells MW-2, MW-3 and MW-7, were dry or contained less than two feet of water column in the well. The apparent groundwater flow direction during both events was radial towards the groundwater recovery system extraction wells MW-16D and RW-1 for both the shallow and deep portions of the aquifer. The apparent groundwater flow direction outside the extraction well radius of influence was toward the southeast / south in the shallow portion of the aquifer. The apparent direction of

groundwater flow outside of the extraction well radius of influence is undetermined in the deep portion of the aquifer because all deep wells except MW-12D and MW-26D lie within the influenced area of the groundwater recovery system, but is inferred to be toward the southeast / south based on groundwater elevation data acquired before the groundwater recovery system commenced operation.

A groundwater gauging and sampling event was conducted from March 9 through March 12, 2015. Groundwater samples were collected from select on-site and off-site monitoring wells in accordance with the monitoring schedule presented in the October 2, 2014 CAPA as modified by the DEQ and communicated in the March 2, 2015 CAPA Approval letter; and the approved Activity Authorization Form (AAF) for the reporting period. Monitoring wells MW-2 and MW-7 contained an insufficient volume of were dry during the sampling event and groundwater samples were not collected from these wells. Monitoring well MW-1 contained insufficient water for low flow purge methodology and a sample was collected using three volume purge methodology. Groundwater monitoring and analytical data for the shallow and deep monitoring wells is summarized in **Tables 3** and **4**, respectively. An MTBE isoconcentration map of the analytical results from the shallow wells is included as Figure 5. An MTBE isoconcentration map of the analytical results from the deep wells is included as Figure 6.

#### FIRST QUARTER 2015 REMEDIAL ACTIVITIES

Soil vapor extraction (SVE) and groundwater recovery systems operated at the Site during the First Quarter 2015. System operations and maintenance (O&M) activities were completed for each system during the quarter. Typical SVE O&M activities include sample collection, maintaining a record of system performance data, vacuum applied to the extraction wells, and vacuum influence and depth to water in monitoring wells. Typical groundwater recovery system O&M activities include system performance and permit required sample collection, maintaining a record of system performance data, equipment inspection and preventative maintenance, and exchanging consumable materials, such as bag filters and filter media, as necessary. A summary of system performance is included below.

#### Soil Vapor Extraction System

Percent Run Time First 100% (December 29, 2014 through March 17,

Quarter 2015: 2015)

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> Technique Soil vapors are extracted from six extraction

> > wells [Soil Vapor Extraction (SVE) well SVE-1 through SVE-5, and monitoring well MW-14]

utilizing a rotary claw pump.

**Permits** Permit exemption granted on

January 24, 2014

Discharge Monitoring

Bi-Monthly

Frequency

Extraction Wells Open SVE-1, SVE-3, SVE-5, and MW-14

139.4 cfm Average Flow Rate

Estimated Vapor Phase 37.1 pounds

Hydrocarbon Removal

 $(TPH>C_4-C_{10})$ 

Estimated Vapor Phase MTBE 2.1 pounds

Removal

Remediation system vapor monitoring, performance data, and system operation and maintenance are summarized in Table 6. At the request of the DEQ, two SVE effluent samples were collected for laboratory analysis of BTEX and MTBE for analysis using EPA Method TO-15. One sample was also analyzed for TPH carbon range C1-C4 and TPH carbon range >C4-C10 using EPA Method18 / 25 modified. The data is summarized in Table 6 and the Lancaster Laboratories Analysis Reports are included within **Appendix B**.

The SVE system at the Site was shut down on March 17, 2015. As per the CAPA, the remedial endpoint for soil vapor has been achieved and concentrations of vapor phase hydrocarbons including MTBE above laboratory detection limits have not been measured during the six month operation of the SVE system using EPA Method 18 /25 modified. In the First Quarter 2015, the two SVE effluent samples collected were analyzed by EPA Method TO-15, which has a lower detection limit than EPA Method 18. The results of MTBE in the effluent air samples collected in February and March 2015 were 0.1. milligrams per cubic meter (mg/m<sup>3</sup>) sample and 0.065 mg/m<sup>3</sup>; respectively. The average MTBE recovery during the time period between the two samples, assuming an average concentration of 0.0825 mg/m3 MTBE and flow rate of 100.3 cfm, was 3.1 X

10<sup>-5</sup> pounds MTBE per hour. As comparison the groundwater recovery system MTBE mass removal rate is of 0.02 pounds MTBE per hour.

#### **Groundwater Recovery System**

Percent Run Time First 78% (December 29, 2014 through March 27,

Quarter 2015: 2015)

Technique Groundwater is extracted from two extraction

wells (MW-16D and RW-1) via electric

submersible pumps.

Permits VPDES Permit # VAG830477

Discharge Monitoring Twice Monthly

Frequency

Extraction Wells Open RW-1 and MW-16D

Average Flow Rate 5.99 gpm

Estimated MTBE Mass Reporting Period (December 29, 2014 through

Removal: March 27, 2015): 40.49 pounds.

Since system start-up (August 28, 2014

through March 27, 2015): 229.05 pounds.

Remediation system groundwater monitoring, performance data, and system operation and maintenance visits are summarized in **Table 7**. Seven groundwater recovery system effluent samples were collected for laboratory analysis in the reporting period (**Appendix C**). In accordance with the Virginia Pollution Discharge Elimination System (VPDES) permit samples were analyzed for BTEX and MTBE twice monthly, as well as chlorinated VOCs once monthly.

The percent run time for the First Quarter 2015 was affected by breakthrough of MTBE in the liquid granular activated carbon (LGAC) treatment train, system optimization, and the extended period of subfreezing temperatures in February 2015.

On January 14, 2015, the groundwater recovery system was temporarily shut down pending contractor availability to complete a carbon change due to MTBE breakthrough detected in the January 5, 2015, sample collected from the system discharge at a concentration of 11 micrograms per liter ( $\mu$ g/L). Note that the VPDES MTBE discharge limit for this Site is 15  $\mu$ g/L. On January 22, 2015, a change out of 2,000 pounds of

spent LGAC for the groundwater treatment system was performed. Following carbon change out, the liquid phase carbon units were then filled with potable water to activate the LGAC and the system was restarted on January 26, 2015. On January 30, 2015, pumping from monitoring well MW-16D was initiated to increase the extraction influence in the vicinity of monitoring wells located on the former Shell station.

On February 14, 2015, the groundwater recovery system shut down on alarm due to an electrical service interruption. During this time the average temperature was below freezing. While the exterior piping and hoses of the groundwater recovery and treatment system were heat traced and insulated, the electrical service interruption also caused the heat trace to fail and sections of the piping froze. On February 19 and 20, 2015, the exterior piping and hoses were thawed, inspected for damage, and upgraded heat trace and insulation were applied. The system was restarted on February 20, 2015.

#### **Groundwater Recovery System Data Discussion**

The March 12, 2015, groundwater sample collected from monitoring well MW-20D (73-83) shows an increase from 120 μg/L in the Third Quarter 2014 to 340 μg/L. On March 27, 2015, a confirmatory groundwater sample was collected from the well and the sampling result also shows an increase in MTBE concentration since the March 12, 2015 sample. In an abundance of caution, the remedial well MW-16D was shut down in order to evaluate the MTBE concentrations in the MW-20D (73-83) interval. The vertical gradients of the three intervals of MW-20D as well as the gradients of nearby MW-21S/I were evaluated before and after the operation of MW-16D.

Following the start of pumping from MW-16D, changes in vertical gradient at MW-20D / MW-21S / MW-21I were observed. When only RW-1 was pumping, the vertical gradient was downward from the overburden to the interface of the saprolite and bedrock (MW-21I), and upward from the shallow bedrock to the saprolite (MW-20D [73-83]) interval. The vertical gradient deeper in bedrock (MW-20D (90-100) to MW-20D (132-142)) remained downward, as had been observed prior to pumping. This indicated that RW-1 was primarily extracting water (and lowering the head) within the saprolite.

When MW-16D began pumping, the vertical gradients above MW-20 (73-83) were both oriented downward (MW-21S to MW-20D (73-83) and MW-21I to MW-20D (73-83)). The vertical gradients below MW-20D (73-83) also remained downward; however, the

magnitude was considerably reduced. This indicated that pumping at MW-16D was extracting water, and lowering the head at a location approximately 10 feet into bedrock.

This change in vertical gradients following the commencement of pumping at MW-16D suggest that additional water is being extracted from a slightly deeper interval approximately 10 feet into bedrock, 73-83 feet below grade, and drawing water downward vertically either along the well bore or through fractures in the upper surface of the bedrock. This change in vertical flow is reflected in the change in MTBE concentration at MW-20D (73-83) and MW-21I. The MTBE detected at MW-21I has been reduced approximately 600 μg/L, while MTBE detected at MW-20D (73-83) has increased approximately 1,000 μg/L. This indicates that MTBE has been drawn downward slightly due to the change in vertical gradient. The MTBE concentrations in the deeper intervals are below laboratory detection limits, further suggesting that MW-20D (73-83) has become the new capture interval with pumping at MW-16D.

As the pumping at MW-16D appears to both increase the capture zone to the east, and more strongly affect MTBE concentrations in the overburden and saprolite as observed by the 7,000 μg/L decrease in MTBE concentrations within W-1, while reducing downward vertical flow below the 83-foot level, Kleinfelder reactivated MW-16D.

#### **ACTIVITIES PLANNED FOR NEXT PERIOD (SECOND QUARTER 2015)**

Activities planned for the Second Quarter 2015 include continued operation and maintenance of the groundwater recovery system, submit a new permit application to the Virginia Department of Transportation in order to maintain MW-18D, and one groundwater sampling event in June 2015 of select monitoring wells.

#### **LIMITATIONS**

This work was performed in a manner consistent with that level of care and skill ordinarily exercised by other members of Kleinfelder's profession practicing in the same locality, under similar conditions and at the date the services are provided. Our conclusions, opinions and recommendations are based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no other representation, guarantee or warranty,

express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

#### **FIGURES**

- 1 Local Area Map
- 2 Site Plan
- 3 Hydrocarbon Distribution / Groundwater Contour Map - Shallow Wells (March 10 through 12, 2015)
- Hydrocarbon Distribution / Groundwater Contour Map Deep Wells (March 9 4 through 27, 2015)
- 5 MTBE Isoconcentration Map – Shallow Wells (March 9 through 12, 2015)
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- Α Lancaster Laboratories Analysis Reports – Groundwater
- В Lancaster Laboratories Analysis Reports – SVE System
- Lancaster Laboratories Analysis Reports Groundwater Recovery System

Sincerely yours,

**KLEINFELDER** 

Paxton D. Wertz

Geologist

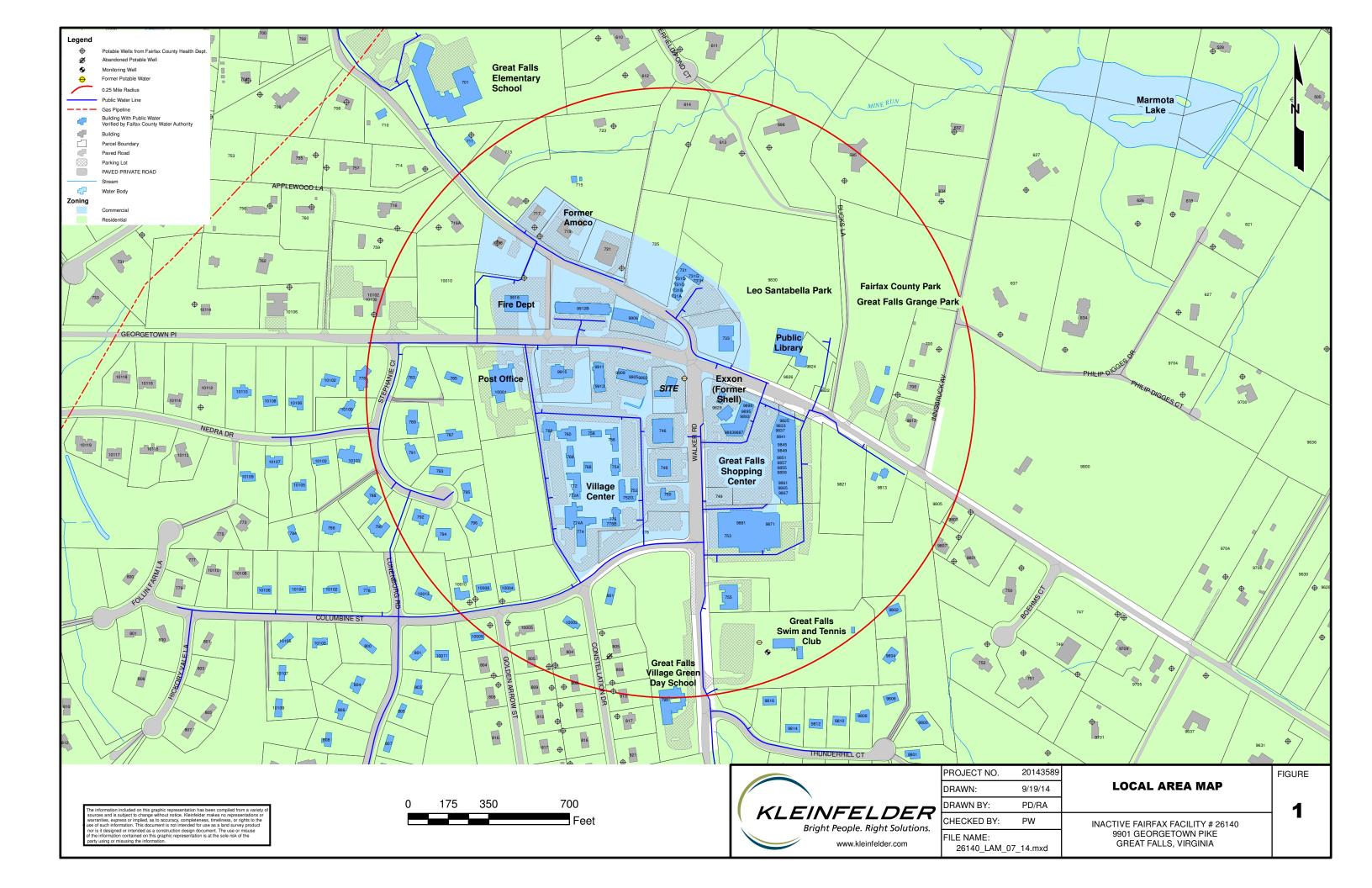
Mark C. Steele

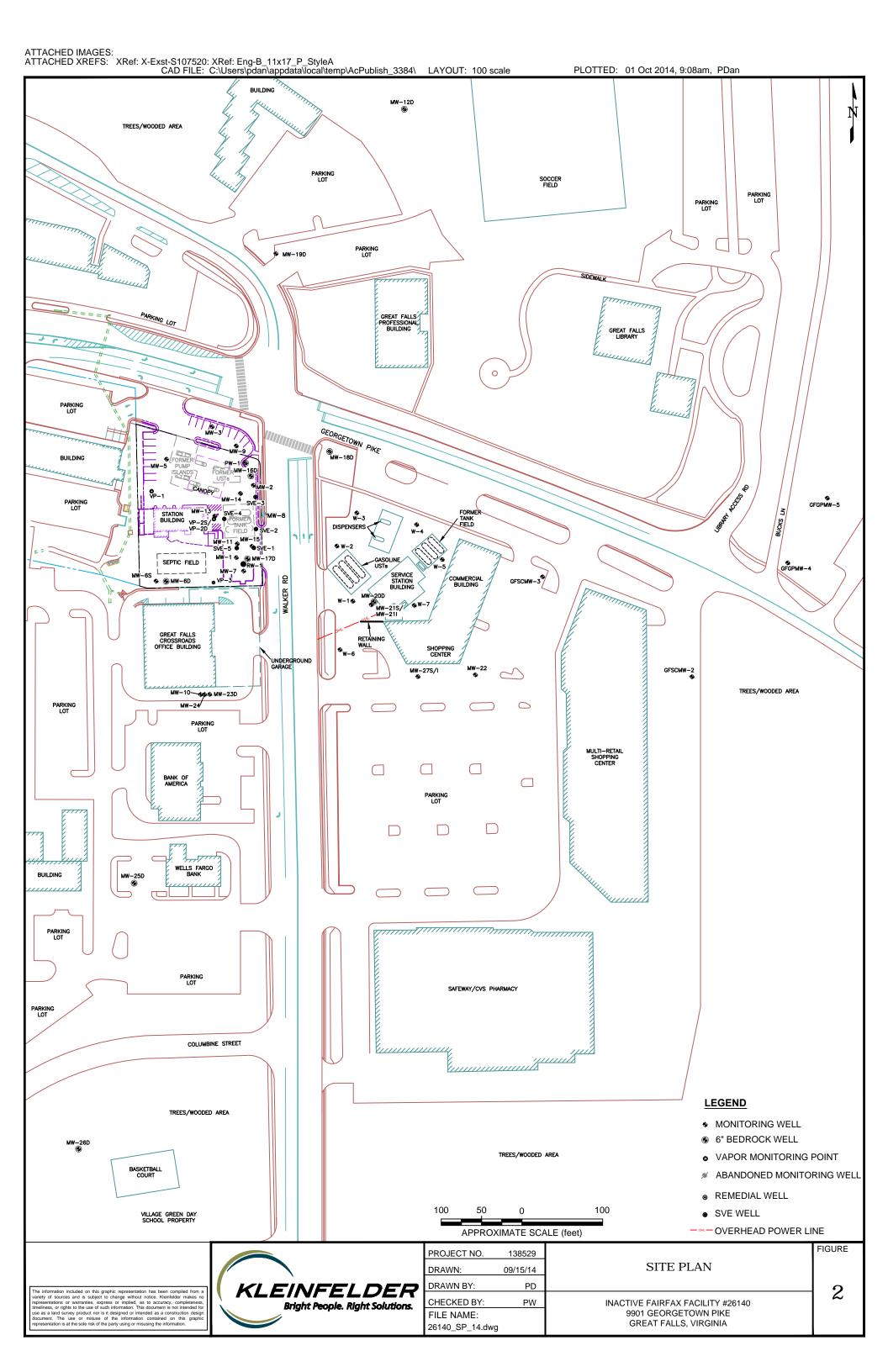
Senior Program Manager

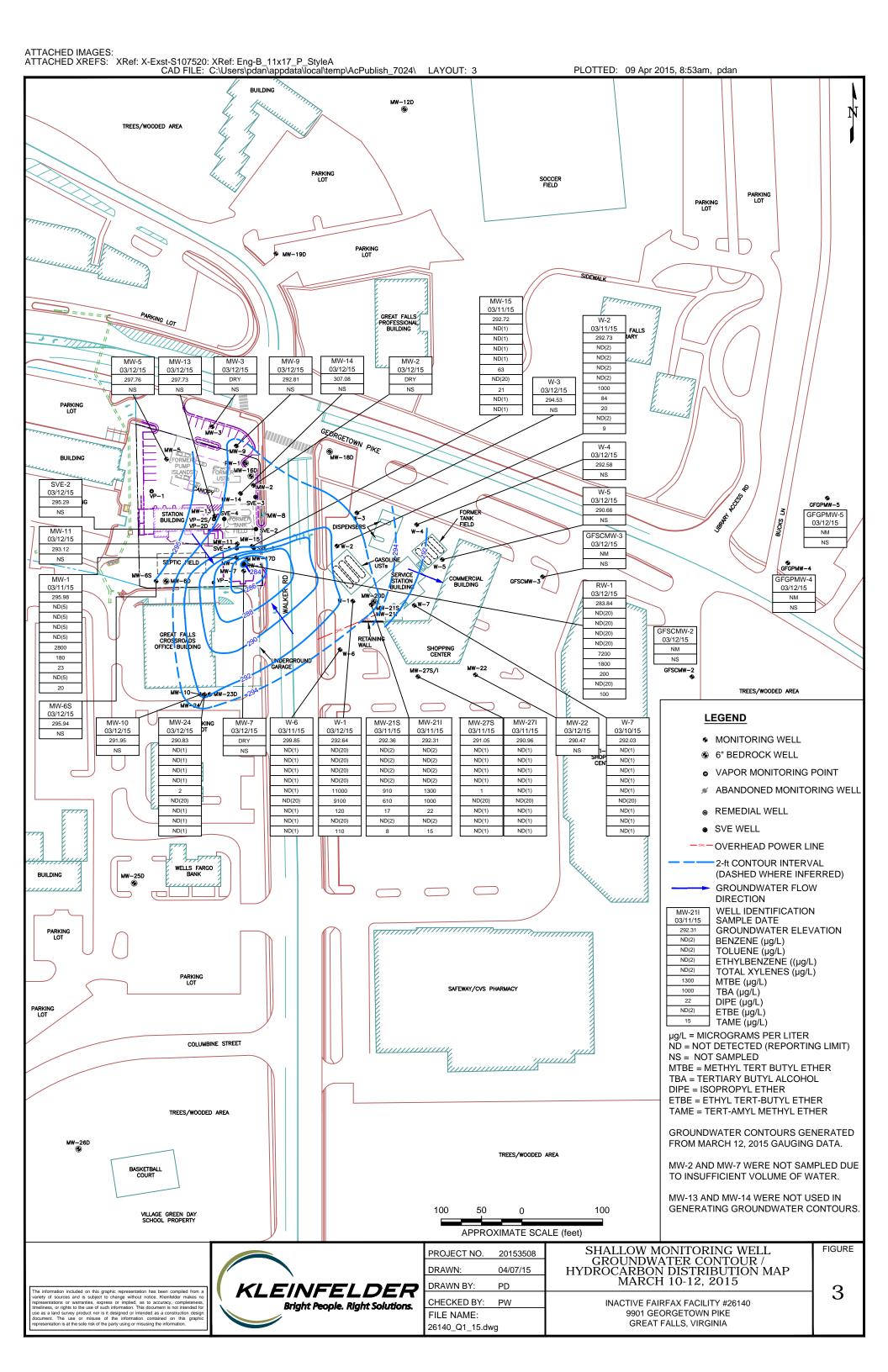
Made C. Ville



# **FIGURES**







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GREAT FALLS, VIRGINIA



# **TABLES**

# TABLE 1 Monitoring Well Construction Details

Inactive Fairfax Facility #26140 9901 Georgetown Pike Great Falls, Virginia

Monitoring Well	Installation Date	Well Type	Well Diameter (inch)	Top of Casing Elevation (feet)	Riser / Casing Length (feet)	Screen Length / Open Interval (feet)	Total Borehole Depth (feet below grade)	Screen / Open Interval (feet below grade)	Comments
MW-1	7/20/2009	Monitoring	2	328.99	20	17	37	20-37	
MW-2	7/21/2009	Monitoring	2	332.05	25	15	42	25-40	
MW-3	7/22/2009	Monitoring	2	333.98	25	10	35	25-35	
MW-5	7/22/2009	Monitoring	2	332.35	30	10	42	30-40	
MW-6S	9/11/2009	Monitoring	4	321.85	20	15	35	20-35	
MW-6D	9/11/2009	Deep Monitoring	6	323.09	70	50	120	70-120	Open borehole after 70 feet
MW-7	10/16/2009	Monitoring	2	327.96	15	25	40	15-40	
MW-8	10/8/2009	Monitoring	2	330.54	25	20	45	25-45	Abandoned 9/19/2013
MW-9	10/9/2009	Monitoring	2	333.46	25	20	45	25-45	
MW-10	10/12/2009	Monitoring	2	324.17	10	30	40	10-40	
MW-11	10/14/2009	Monitoring	2	329.64	10	30	40	10-40	
MW-12D	1/11/2011	Deep Monitoring	6	326.43	100	60	160	100-160	Open borehole after 100 feet
MW-13	8/18/2011	Monitoring	4	332.00	25	20	45	25-45	
MW-14	8/18/2011	Monitoring	4	331.81	25	20	45	25-45	
MW-15	8/18/2011	Monitoring	4	328.95	25	20	45	25-45	
MW-16D	11/22/2011	Monitoring	6	332.90	85	25	110	85-110	Open borehole after 85 feet.
MW-17D	4/9/2013	Deep Monitoring	6	328.99	68	82	150	68-150	Converted to CMT on 4/9/2014.

# TABLE 1 Monitoring Well Construction Details

Inactive Fairfax Facility #26140 9901 Georgetown Pike Great Falls, Virginia

Monitoring Well	Installation Date	Well Type	Well Diameter (inch)	Top of Casing Elevation (feet)	Riser / Casing Length (feet)	Screen Length / Open Interval (feet)	Total Borehole Depth (feet below grade)	Screen / Open Interval (feet below grade)	Comments
MW-17D (CMT-1)	4/9/2014	Discrete Interval Monitoring	0.4	328.84	71	6	150	71-77	
MW-17D (CMT-2)	4/9/2014	Discrete Interval Monitoring	0.4	328.84	79	4	150	79-83	The Continuous Multichannel
MW-17D (CMT-3)	4/9/2014	Discrete Interval Monitoring	0.4	328.84	86	4	150	86-90	Tubing (CMT) screens are approximately six inches in
MW-17D (CMT-4)	4/9/2014	Discrete Interval Monitoring	0.4	328.84	91	2	150	91-93	length. The Screen Length / Open Interval and Screen / Open Interval columns refer to the sand
MW-17D (CMT-5)	4/9/2014	Discrete Interval Monitoring	0.4	328.84	114	6	150	114-120	pack installed in the borehole annulus surrounding the CMT
MW-17D (CMT-6)	4/9/2014	Discrete Interval Monitoring	0.4	328.84	126	6	150	126-132	port.
MW-17D (CMT-7)	4/9/2014	Discrete Interval Monitoring	0.38	328.84	146	4	150	146-150	
MW-18D	11/22/2011	Deep Monitoring	6	334.88	97	58	136	92-150	Open borehole after 92 feet. Borehole blocked by rock at 101 feet during testing on 4/30/13.
MW-19D	3/8/2014	Deep Monitoring	2	341.91	80	20	100	80-100	
MW-20D	4/7/2014	Deep Monitoring	6	329.80	70	72	142	70-142	Open borehole after 70 feet.
MW-21I	4/1/2014	Monitoring	2	329.71	56	10	66	56-66	Part of a nested well pair including MW-21S
MW-21S	4/1/2014	Monitoring	2	329.69	26	20	46	26-46	Part of a nested well pair including MW-21I
MW-22	4/3/2014	Monitoring	2	320.97	20	20	40	20-40	
MW-23D	5/1/2014	Deep Monitoring	2	324.81	90	10	100	90-100	
MW-24	4/3/2014	Monitoring	2	324.49	50	10	60	50-60	
MW-25D	8/17/2014	Deep Monitoring	6	323.92	65	36	101	36-101	Open borehole after 65 feet.
MW-26D	8/21/2014	Deep Monitoring	6	295.13	57	47	104	57-104	Open borehole after 57 feet.
MW-27I	8/21/2014	Monitoring	2	323.35	55	10	65	55-65	Part of a nested well pair including MW-27S

# TABLE 1 Monitoring Well Construction Details

Inactive Fairfax Facility #26140 9901 Georgetown Pike Great Falls, Virginia

Monitoring Well	Installation Date	Well Type	Well Diameter (inch)	Top of Casing Elevation (feet)	Riser / Casing Length (feet)	Screen Length / Open Interval (feet)	Total Borehole Depth (feet below grade)	Screen / Open Interval (feet below grade)	Comments
MW-27S	8/21/2014	Monitoring	2	323.40	20	20	40	20-40	Part of a nested well pair including MW-27I
PW-1	Unknown	Deep Monitoring	6	334.54	55	20	75	55 - 75	Former potable well. Partially abandoned in November 2011. Original well depth was approximately 116 feet.
RW-1	3/13/2014	Recovery	6	328.31	21	70	91	21-91	Total drilled depth was 100 feet; borehole collapsed to 91 feet during the installation of screen and casing.
SVE-1	2/17/2014	Soil Vapor Extraction	4	NSVD	15	20	35	15-35	
SVE-2	2/18/2014	Soil Vapor Extraction	4	329.64	25	20	45	25-45	Designed to serve as a SVE well and monitoring well to replace the abandoned MW-8
SVE-3	2/19/2014	Soil Vapor Extraction	4	NSVD	15	20	35	15-35	
SVE-4	2/19/2014	Soil Vapor Extraction	4	NSVD	15	20	35	15-35	
SVE-5	2/18/2014	Soil Vapor Extraction	4	NSVD	15	20	35	15-35	

#### **Notes:**

NSVD - Not Surveyed to Vertical Datum CMT - Continuous Multichannel Tubing

#### TABLE 2

# Monitoring Well Gauging Data Summary - First Quarter 2015 Inactive Fairfax Facility #26140 9901 Georgetown Pike Great Falls, Virginia

#### February 11, 2015 through March 12, 2015

		Top of Casing Elevatio	Depth to Water	Depth to Hydro- carbon	Hydro- carbon Thickness	Correcte d GW Elevation	
Sample ID	Date	n	(feet)	(feet)	(feet)	(feet)	Comments
MW-1	03/12/2015	328.99	33.00	ND	ND	295.99	
MW-3	03/12/2015	333.98	DRY	DRY	DRY	DRY	
MW-5	02/11/2015	332.35	34.53	ND	ND	297.82	
	03/12/2015	332.35	34.59	ND	ND	297.76	
MW-6S	02/11/2015	321.85	26.02	ND	ND	295.83	
	03/12/2015	321.85	25.91	ND	ND	295.94	
MW-6D(65)	02/11/2015	323.09	29.18	ND	ND	293.91	
	03/12/2015	323.09	28.85	ND	ND	294.24	
MW-6D(85)	02/11/2015	323.09	29.18	ND	ND	293.91	
	03/12/2015	323.09	28.85	ND	ND	294.24	
MW-6D(105)	02/11/2015	323.09	29.18	ND	ND	293.91	
	03/12/2015	323.09	28.85	ND	ND	294.24	
MW-7	03/12/2015	327.96	DRY	DRY	DRY	DRY	
SVE-2	03/12/2015	329.69	34.40	ND	ND	295.29	
MW-9	02/11/2015	333.46	40.71	ND	ND	292.75	
	03/12/2015	333.46	40.65	ND	ND	292.81	
MW-10	02/11/2015	324.17	32.35	ND	ND	291.82	
	03/12/2015	324.17	32.22	ND	ND	291.95	
MW-11	03/12/2015	329.64	36.52	ND	ND	293.12	
MW-13	03/12/2015	332.00	34.27	ND	ND	297.73	
MW-14	03/12/2015	331.82	24.74	ND	ND	307.08	
MW-15	03/12/2015	328.95	36.25	ND	ND	292.70	
MW-16D(95)	02/11/2015	332.90	51.84	ND	ND	281.06	
	03/12/2015	332.90	51.28	ND	ND	281.62	
MW-17D(75)	03/12/2015	328.84	42.26	ND	ND	286.58	
MW-17D(81)	03/12/2015	328.84	42.27	ND	ND	286.57	
MW-17D(87.75)	03/12/2015	328.84	36.24	ND	ND	292.60	
MW-17D(92)	03/12/2015	328.84	37.01	ND	ND	291.83	
MW-17D(117)	03/12/2015	328.84	37.65	ND	ND	291.19	
MW-17D(129.75)	03/12/2015	328.84	36.99	ND	ND	291.85	
MW-17D(147)	03/12/2015	328.84	37.49	ND	ND	291.35	
MW-18D	02/11/2015	334.88	42.16	ND	ND	292.72	
	03/12/2015	334.88	42.19	ND	ND	292.69	
MW-19D	02/11/2015	341.91	47.39	ND	ND	294.52	
	03/12/2015	341.91	48.76	ND	ND	293.15	
MW-20D(73-83)	02/11/2015	329.57	37.86	ND	ND	291.71	
	03/12/2015	329.57	38.02	ND	ND	291.55	

#### TABLE 2

# Monitoring Well Gauging Data Summary - First Quarter 2015 Inactive Fairfax Facility #26140 9901 Georgetown Pike Great Falls, Virginia

#### February 11, 2015 through March 12, 2015

MW-20D(90-100)	02/11/2015	329.58	38.24	ND	ND	291.34	
	03/12/2015	329.58	38.22	ND	ND	291.36	
MW-20D(132-142)	02/11/2015	329.56	40.05	ND	ND	289.51	
, , ,	03/12/2015	329.56	38.26	ND	ND	291.30	
MW-21S	02/11/2015	329.69	37.29	ND	ND	292.40	
	03/12/2015	329.69	37.34	ND	ND	292.35	
MW-21I	02/11/2015	329.71	37.35	ND	ND	292.36	
	03/12/2015	329.71	37.41	ND	ND	292.30	
MW-23D	02/11/2015	324.81	34.21	ND	ND	290.60	
	03/12/2015	324.81	33.63	ND	ND	291.18	
MW-24	03/12/2015	324.49	33.66	ND	ND	290.83	
MW-25D(76)	02/11/2015	317.18	24.72	ND	ND	292.46	
	03/12/2015	317.18	23.33	ND	ND	293.85	
MW-25D(90)	02/11/2015	317.18	24.72	ND	ND	292.46	
	03/12/2015	317.18	23.33	ND	ND	293.85	
MW-25D(98)	02/11/2015	317.18	24.72	ND	ND	292.46	
	03/12/2015	317.18	23.33	ND	ND	293.85	
MW-26D(67)	02/11/2015	295.13	2.32	ND	ND	292.81	
	03/12/2015	295.13	1.97	ND	ND	293.16	
MW-26D(78)	02/11/2015	295.13	2.32	ND	ND	292.81	
	03/12/2015	295.13	1.97	ND	ND	293.16	
MW-26D(89)	02/11/2015	295.13	2.32	ND	ND	292.81	
	03/12/2015	295.13	1.97	ND	ND	293.16	
MW-27S	02/11/2015	323.40	32.27	ND	ND	291.13	
	03/12/2015	323.40	32.35	ND	ND	291.05	
MW-27I	02/11/2015	323.35	32.30	ND	ND	291.05	
	03/12/2015	323.35	32.38	ND	ND	290.97	
PW-1	02/11/2015	334.54	43.55	ND	ND	290.99	
	03/12/2015		43.30	ND	ND	291.24	
RW-1	02/11/2015	328.31	46.45	ND	ND	281.86	
	03/12/2015		44.47	ND	ND	283.84	
W-1	02/11/2015	328.53	36.18	ND	ND	292.35	
	03/12/2015		35.89	ND	ND	292.64	
W-2	02/11/2015		36.71	ND	ND	292.76	
	03/12/2015	329.47	36.74	ND	ND	292.73	
W-3	02/11/2015	330.14	35.93	ND	ND	294.21	
	03/12/2015	330.14	35.61	ND	ND	294.53	
W-4	02/11/2015		34.75	ND	ND	292.92	
	03/12/2015	327.67	35.09	ND	ND	292.58	
W-5	02/11/2015	327.81	36.04	ND	ND	291.77	
	03/12/2015	327.81	37.15	ND	ND	290.66	

#### TABLE 2

# Monitoring Well Gauging Data Summary - First Quarter 2015 Inactive Fairfax Facility #26140 9901 Georgetown Pike Great Falls, Virginia

#### February 11, 2015 through March 12, 2015

W-6	02/11/2015	325.21	32.26	ND	ND	292.95	
	03/12/2015	325.21	25.39	ND	ND	299.82	
W-7	02/11/2015	329.77	36.48	ND	ND	293.29	
	03/12/2015	329.77	37.79	ND	ND	291.98	

#### Notes:

GW - Groundwater

ND - Not detected

NM - Not monitored

NSVD - Not surveyed to vertical datum

Table 3
Groundwater Monitoring & Analytical Data – Shallow Wels

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-1	7/24/2009	100.00	30.45	ND	ND	69.55	13.3	<1.0	0.53	24	193000	NA	NA	NA	NA	Screened from 20-37'
	8/18/2009	328.99	NM	NM	NM	NM	ND(200)	ND(200)	ND(200)	ND(200)	138000	NA	NA	NA	NA	
	10/15/2009	328.99	31.88	ND	ND	297.11	ND(200)	ND(200)	ND(200)	ND(200)	139000	47000	4070	ND(1000)	2130	
	6/22/2010	328.99	28.65	ND	ND	300.34	ND(5)	ND(7)	ND(8)	ND(8)	13000	NA	NA	NA	NA	
	9/30/2010	328.99	31.11	ND	ND	297.88	ND(50)	ND(70)	ND(80)	110	240000	NA	NA	NA	NA	
	12/16/2010	328.99	30.93	ND	ND	298.06	ND(100)	ND(140)	ND(160)	ND(160)	220000	NA	NA	NA	NA	
	2/17/2011	328.99	31.46	ND	ND	297.53	ND(250)	ND(350)	ND(400)	ND(400)	190000	NA	NA	NA	NA	
	5/24/2011	328.99	30.24	ND	ND	298.75	ND(50)	ND(70)	ND(80)	ND(80)	140000	NA	NA	NA	NA	
	9/2/2011	328.99	32.92	ND	ND	296.07	ND(50)	ND(70)	ND(80)	ND(80)	160000	NA	NA	NA	NA	
	12/29/2011	328.99	30.99	ND	ND	298.00	ND(50)	ND(70)	ND(80)	ND(80)	160000	NA	NA	NA	NA	
	6/1/2012	328.99	31.47	ND	ND	297.52	ND(50)	ND(70)	ND(80)	ND(80)	140000	NA	NA	NA	NA	
	2/25/2013	328.99	32.84	ND	ND	296.15	ND(250)	ND(250)	ND(250)	ND(250)	120000	15000	3700	ND(250)	1700	
	6/6/2013	328.99	32.14	ND	ND	296.85	ND(50)	ND(70)	ND(80)	ND(80)	150000	NA	NA	NA	NA	
	12/19/2013	328.99	33.06	ND	ND	295.93	ND(250)	ND(250)	ND(250)	ND(250)	84000	6900	2200	ND(250)	1100	
	3/25/2014	328.99	31.04	ND	ND	297.95	ND(500)	ND(500)	ND(500)	ND(500)	71000	ND(8000)	1200	ND(500)	850	
	6/20/2014	328.99	29.43	ND	ND	299.56	ND(20)	ND(20)	ND(20)	ND(20)	20000	ND(400)	490	ND(20)	210	
	9/8/2014	328.99	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient volume to sample
	12/9/2014	328.99	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient volume to sample
	3/11/2015	328.99	33.01	ND	ND	295.98	ND(5)	ND(5)	ND(5)	ND(5)	2800	180	23	ND(5)	20	
		Mann-Kend	lall Stati	stic			0	0	0	-11	-55	-5	-10	0	-10	

#### **Groundwater Monitoring & Analytical Data - Shallow Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					1
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-2	7/24/2009	102.90	33.19	ND	ND	69.71	70.2	8.0	1.0	131	107000	NA	NA	NA	NA	Screened from 25-40'
	8/18/2009	332.05	NM	NM	NM	NM	ND(100)	ND(100)	ND(100)	ND(100)	87100	NA	NA	NA	NA	
	10/15/2009	332.05	34.41	ND	ND	297.64	ND(200)	ND(200)	ND(200)	ND(200)	122000	ND(5000)	6130	ND(1000)	2420	
	7/1/2010	332.05	31.63	ND	ND	300.42	ND(100)	91.3	ND(100)	ND(100)	52400	NA	NA	NA	NA	
	9/30/2010	332.05	32.96	ND	ND	299.09	ND(25)	ND(35)	ND(40)	ND(40)	37000	NA	NA	NA	NA	
	12/16/2010	332.05	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	Well inaccessible
	2/17/2011	332.05	34.15	ND	ND	297.90	ND(100)	ND(140)	ND(160)	ND(160)	140000	NA	NA	NA	NA	
	5/24/2011	332.05	32.92	ND	ND	299.13	ND(25)	ND(35)	ND(40)	ND(40)	54000	NA	NA	NA	NA	
	9/2/2011	332.05	35.53	ND	ND	296.52	ND(50)	ND(70)	ND(80)	ND(80)	160000	NA	NA	NA	NA	
	12/29/2011	332.05	33.64	ND	ND	298.41	ND(25)	ND(35)	ND(40)	ND(40)	49000	NA	NA	NA	NA	
	6/1/2012	332.05	34.16	ND	ND	297.89	ND(50)	ND(70)	ND(80)	ND(80)	100000	NA	NA	NA	NA	
	2/25/2013	332.05	35.47	ND	ND	296.58	ND(250)	ND(250)	ND(250)	ND(250)	71000	4600	1900	ND(250)	1100	
	6/6/2013	332.05	34.91	ND	ND	297.14	ND(3)	ND(4)	ND(4)	ND(4)	3500	NA	NA	NA	NA	
	12/19/2013	332.05	35.50	ND	ND	296.55	ND(130)	ND(130)	ND(130)	ND(130)	19000	6800	710	ND(130)	280	
	3/25/2014	332.05	33.30	ND	ND	298.75	ND(50)	ND(50)	ND(50)	ND(50)	7500	2500	310	ND(50)	110	
	6/20/2014	332.05	31.27	ND	ND	300.78	ND(1)	ND(1)	ND(1)	ND(1)	450	ND(20)	29	ND(1)	7	
	9/10/2014	332.05	33.74	ND	ND	298.31	ND(1)	ND(1)	ND(1)	ND(1)	860	ND(20)	38	ND(1)	15	
	12/9/2014	332.05	40.02	ND	ND	292.03	NS	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient volume to sample
	3/12/2015	332.05	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient volume to sample
		Mann-Keno	lall Stati	stic			0	-12	0	0	-38	-7	-8	0	-8	

#### **Groundwater Monitoring & Analytical Data – Shallow Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-3	7/24/2009	104.99	33.67	ND	ND	71.32	< 0.50	<1.0	<1.0	ND	5.7	NA	NA	NA	NA	Screened from 25-35'
	8/18/2009	333.98	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	10/15/2009	333.98	34.51	ND	ND	299.47	NS	NS	NS	NS	NS	NS	NS	NS	NS	Insufficent volume to sample
	7/1/2010	333.98	32.39	ND	ND	301.59	ND(2)	ND(2)	ND(2)	ND(2)	1.9	NA	NA	NA	NA	
	9/30/2010	333.98	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12/16/2010	333.98	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	2/17/2011	333.98	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	5/24/2011	333.98	33.63	ND	ND	300.35	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	2 J	NA	NA	NA	NA	
	9/2/2011	333.98	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12/29/2011	333.98	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	6/1/2012	333.98	34.56	ND	ND	299.42	NS	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient volume to sample
	2/25/2013	333.98	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	6/6/2013	333.98	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12/18/2013	333.98	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/24/2014	333.98	34.25	ND	ND	299.73	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	6/19/2014	333.98	32.09	ND	ND	301.89	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	9/4/2014	333.98	34.42	ND	ND	299.56	NS	NS	NS	NS	NS	NS	NS	NS	NS	Insufficent volume to sample
	12/9/2014	333.98	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient volume to sample
	3/12/2015	333.98	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	Mann-Kendall Statistic							N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

#### **Groundwater Monitoring & Analytical Data – Shallow Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-5	7/24/2009	103.43	30.72	ND	ND	72.71	< 0.50	<1.0	<1.0	ND	1.3	NA	NA	NA	NA	Screened from 30-40'
	8/18/2009	332.35	NM	NM	NM	NM	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.48	NA	NA	NA	NA	
	10/15/2009	332.35	32.51	ND	ND	299.84	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	11.4	ND(25)	0.46	ND(5.0)	ND(5.0)	
	6/22/2010	332.35	29.40	ND	ND	302.95	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	9/30/2010	332.35	32.30	ND	ND	300.05	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1	NA	NA	NA	NA	
	12/16/2010	332.35	32.12	ND	ND	300.23	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	12	NA	NA	NA	NA	
	2/17/2011	332.35	32.31	ND	ND	300.04	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	2 J	NA	NA	NA	NA	
	5/24/2011	332.35	30.84	ND	ND	301.51	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.9 J	NA	NA	NA	NA	
	9/2/2011	332.35	33.39	ND	ND	298.96	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.9 J	NA	NA	NA	NA	
	12/29/2011	332.35	31.36	ND	ND	300.99	ND(0.5)	1 J	ND(0.8)	1 J	7	NA	NA	NA	NA	
	6/1/2012	332.35	31.93	ND	ND	300.42	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.8 J	NA	NA	NA	NA	
	2/25/2013	332.35	33.28	ND	ND	299.07	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	6/6/2013	332.35	32.55	ND	ND	299.80	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	12/18/2013	332.35	33.92	ND	ND	298.43	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	3/24/2014	332.35	31.32	ND	ND	301.03	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	6/19/2014	332.35	29.30	ND	ND	303.05	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	9/2/2014	332.35	31.37	ND	ND	300.98	ND(1)	ND(1)	ND(1)	ND(1)	2	ND(20)	ND(1)	ND(1)	ND(1)	
	12/9/2014	332.35	35.19	ND	ND	297.16	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	332.35	34.59	ND	ND	297.76	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Keno	dall Statis	stic			0	1	0	1	-18	N/A	N/A	N/A	N/A	

#### **Groundwater Monitoring & Analytical Data - Shallow Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-6S	9/24/2009	NM	NM	NM	NM	NM	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	2.8	ND(25)	2.1	ND(5.0)	ND(5.0)	Screened from 20-35'
	10/15/2009	321.85	23.35	ND	ND	298.50	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	2.8	ND(25)	1.3	ND(5.0)	ND(5.0)	
	6/22/2010	321.85	20.22	ND	ND	301.63	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	2	NA	NA	NA	NA	
	9/30/2010	321.85	23.00	ND	ND	298.85	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.9	NA	NA	NA	NA	
	12/16/2010	321.85	22.82	ND	ND	299.03	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1	NA	NA	NA	NA	
	2/17/2011	321.85	23.02	ND	ND	298.83	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	5/24/2011	321.85	21.66	ND	ND	300.19	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	9/2/2011	321.85	24.04	ND	ND	297.81	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	12/29/2011	321.85	22.15	ND	ND	299.70	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	2 J	NA	NA	NA	NA	
	6/1/2012	321.85	22.72	ND	ND	299.13	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.8 J	NA	NA	NA	NA	
	2/25/2013	321.85	24.03	ND	ND	297.82	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	6/6/2013	321.85	23.49	ND	ND	298.36	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	12/17/2013	321.85	24.63	ND	ND	297.22	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	3/24/2014	321.85	22.19	ND	ND	299.66	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	6/19/2014	321.85	20.01	ND	ND	301.84	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	9/3/2014	321.85	22.41	ND	ND	299.44	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	12/9/2014	321.85	26.42	ND	ND	295.43	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	321.85	25.91	ND	ND	295.94	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Kend	lall Statis	stic			0	0	0	0	-35	N/A	N/A	N/A	N/A	

#### **Groundwater Monitoring & Analytical Data – Shallow Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-7	10/15/2009	327.96	31.21	ND	ND	296.75	2.7	ND(10)	ND(10)	ND(10)	10600	2650	232	ND(50)	217	Screened from 15-40'
	6/22/2010	327.96	28.00	ND	ND	299.96	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	87	NA	NA	NA	NA	
	9/30/2010	327.96	30.24	ND	ND	297.72	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	12/16/2010	327.96	30.15	ND	ND	297.81	2	ND(1)	ND(2)	ND(2)	2100	NA	NA	NA	NA	
	2/17/2011	327.96	30.75	ND	ND	297.21	ND(10)	ND(14)	ND(16)	ND(16)	9700	NA	NA	NA	NA	
	5/24/2011	327.96	29.56	ND	ND	298.40	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	130	NA	NA	NA	NA	
	9/2/2011	327.96	32.21	ND	ND	295.75	11 J	ND(14)	ND(16)	ND(16)	16000	NA	NA	NA	NA	
	12/29/2011	327.96	30.24	ND	ND	297.72	ND(1)	ND(1)	ND(2)	ND(2)	1600	NA	NA	NA	NA	
	6/1/2012	327.96	30.74	ND	ND	297.22	ND(5)	ND(7)	ND(8)	ND(8)	6700	NA	NA	NA	NA	
	2/25/2013	327.96	32.23	ND	ND	295.73	ND(250)	ND(250)	ND(250)	ND(250)	61000	14000	1700	ND(250)	940	
	6/6/2013	327.96	31.49	ND	ND	296.47	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	950	NA	NA	NA	NA	
	12/18/2013	327.96	32.79	ND	ND	295.17	ND(250)	ND(250)	ND(250)	ND(250)	140000	29000	3000	ND(250)	1600	
	3/28/2014	327.96	30.35	ND	ND	297.61	ND(1)	ND(1)	ND(1)	ND(1)	430	ND(20)	13	ND(1)	6	
	6/20/2014	327.96	28.19	ND	ND	299.77	ND(1)	ND(1)	ND(1)	ND(1)	72	35	9	ND(1)	ND(1)	
	9/8/2014	327.96	37.53	ND	ND	290.43	NS	NS	NS	NS	NS	NS	NS	NS	NS	Insufficent volume to sample
	12/9/2014	327.96	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient volume to sample
	3/12/2015	327.96	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient volume to sample
		Mann-Kend	lall Stati	stic			-9	0	0	0	12	-2	-4	0	-4	

#### **Groundwater Monitoring & Analytical Data - Shallow Wells**

				Gauging I	)ata					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-8	10/15/2009	330.54	34.01	ND	ND	296.53	ND(500)	ND(500)	ND(500)	ND(500)	226000	30800	6250	ND(2500)	3080	Screened from 25-45'
	6/22/2010	330.54	30.91	ND	ND	299.63	ND(5)	ND(7)	ND(8)	ND(8)	15000	NA	NA	NA	NA	
	9/30/2010	330.54	32.97	ND	ND	297.57	11	ND(14)	ND(16)	ND(16)	44000	NA	NA	NA	NA	
	12/16/2010	330.54	32.85	ND	ND	297.69	ND(25)	ND(35)	ND(40)	ND(40)	49000	NA	NA	NA	NA	
	2/17/2011	330.54	33.62	ND	ND	296.92	ND(25)	ND(35)	ND(40)	ND(40)	41000	NA	NA	NA	NA	
	5/24/2011	330.54	32.44	ND	ND	298.10	ND(5)	ND(7)	ND(8)	ND(8)	8400	NA	NA	NA	NA	
	9/2/2011	330.54	35.18	ND	ND	295.36	ND(10)	ND(14)	ND(16)	ND(16)	15000	NA	NA	NA	NA	
	12/29/2011	330.54	33.23	ND	ND	297.31	ND(3)	ND(4)	ND(4)	ND(4)	1800	NA	NA	NA	NA	
	6/1/2012	330.54	33.73	ND	ND	296.81	3 J	ND(1)	ND(2)	4 J	1200	NA	NA	NA	NA	
	2/25/2013	330.54	35.27	ND	ND	295.27	ND(5)	ND(5)	ND(5)	ND(5)	180	280	220	ND(5)	ND(5)	
	6/6/2013	330.54	34.49	ND	ND	296.05	0.7 J	ND(0.7)	ND(0.8)	ND(0.8)	160	NA	NA	NA	NA	
	9/19/2013	330.54	36.01	ND	ND	294.53	ND(5)	ND(5)	ND(5)	ND(5)	170	NA	NA	NA	NA	Abandoned (9/19/2013)
•	Mann-Kendall Statistic								0	5	-53	N/A	N/A	N/A	N/A	

#### **Groundwater Monitoring & Analytical Data - Shallow Wells**

				Gauging I	)ata											
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
SVE-2	3/25/2014	329.69	31.32	ND	ND	298.37	ND(1)	ND(1)	ND(1)	ND(1)	600	76	44	ND(1)	11	Screened from 25-45'
	6/19/2014	329.69	27.45	ND	ND	302.24	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	9/10/2014	329.69	30.79	ND	ND	298.90	ND(1)	ND(1)	ND(1)	ND(1)	8	ND(20)	3	ND(1)	ND(1)	
	12/9/2014	329.69	35.25	ND	ND	294.44	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	329.69	34.40	ND	ND	295.29	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Keno	dall Statis	stic			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

#### **Groundwater Monitoring & Analytical Data – Shallow Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					]
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-9	10/15/2009	333.46	35.60	ND	ND	297.86	ND(1.0)	0.33	ND(1.0)	0.38	64.7	ND(25)	125	ND(5.0)	2.9	Screened from 25-45'
	6/22/2010	333.46	32.32	ND	ND	301.14	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	22	NA	NA	NA	NA	
	9/30/2010	333.46	34.85	ND	ND	298.61	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	52	NA	NA	NA	NA	
	12/16/2010	333.46	34.73	ND	ND	298.73	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	81	NA	NA	NA	NA	
	2/17/2011	333.46	35.28	ND	ND	298.18	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	48	NA	NA	NA	NA	
	5/24/2011	333.46	34.04	ND	ND	299.42	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	26	NA	NA	NA	NA	
	9/2/2011	333.46	36.86	ND	ND	296.60	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	80	NA	NA	NA	NA	
	12/29/2011	333.46	34.68	ND	ND	298.78	ND(0.5)	2 J	ND(0.8)	1 J	58	NA	NA	NA	NA	
	6/1/2012	333.46	35.17	ND	ND	298.29	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	190	NA	NA	NA	NA	
	2/25/2013	333.46	36.65	ND	ND	296.81	ND(5)	ND(5)	ND(5)	ND(5)	55	ND(80)	17	ND(5)	ND(5)	
	6/6/2013	333.46	35.98	ND	ND	297.48	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	20	NA	NA	NA	NA	
	12/18/2013	333.46	37.33	ND	ND	296.13	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	3/24/2014	333.46	34.67	ND	ND	298.79	ND(5)	ND(5)	ND(5)	ND(5)	12	ND(80)	6	ND(5)	ND(5)	
	6/19/2014	333.46	32.56	ND	ND	300.90	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	9/8/2014	333.46	35.91	ND	ND	297.55	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12/9/2014	333.46	40.12	ND	ND	293.34	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	333.46	40.65	ND	ND	292.81	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Kend	lall Stati	stic			0	1	0	1	-16	N/A	N/A	N/A	N/A	

#### **Groundwater Monitoring & Analytical Data - Shallow Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-10	10/15/2009	324.17	28.77	ND	ND	295.40	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	10.3	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	Screened from 10-40'
	6/22/2010	324.17	25.80	ND	ND	298.37	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	4	NA	NA	NA	NA	
	12/16/2010	324.17	27.72	ND	ND	296.45	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	10	NA	NA	NA	NA	
	2/17/2011	324.17	28.05	ND	ND	296.12	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	7	NA	NA	NA	NA	
	5/24/2011	324.17	27.04	ND	ND	297.13	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	3 J	NA	NA	NA	NA	
	9/2/2011	324.17	29.60	ND	ND	294.57	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	8	NA	NA	NA	NA	
	12/29/2011	324.17	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	Well inaccessible
	6/1/2012	324.17	28.17	ND	ND	296.00	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	4 J	NA	NA	NA	NA	
	2/25/2013	324.17	29.45	ND	ND	294.72	ND(5)	ND(5)	ND(5)	ND(5)	7	ND(80)	ND(5)	ND(5)	ND(5)	
	6/6/2013	324.17	28.87	ND	ND	295.30	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	12/18/2013	324.17	30.04	ND	ND	294.13	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	3/24/2014	324.17	27.24	ND	ND	296.93	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	6/18/2014	324.17	25.67	ND	ND	298.50	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	9/3/2014	324.17	28.02	ND	ND	296.15	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	12/9/2014	324.17	32.88	ND	ND	291.29	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	324.17	32.22	ND	ND	291.95	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	Mann-Kendall Statistic							0	0	0	-24	0	0	0	0	

#### **Groundwater Monitoring & Analytical Data - Shallow Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-11	10/16/2009	NM	NM	NM	NM	NM	15.3	ND(10)	ND(10)	10.9	38400	23300	1290	ND(50)	464	Screened from 10-40'
	6/22/2010	329.64	29.00	ND	ND	300.64	ND(50)	ND(70)	ND(80)	ND(80)	170000	NA	NA	NA	NA	
	9/30/2010	329.64	31.42	ND	ND	298.22	ND(50)	ND(70)	ND(80)	ND(80)	130000	NA	NA	NA	NA	
	12/16/2010	329.64	31.22	ND	ND	298.42	ND(25)	ND(35)	ND(40)	ND(40)	41000	NA	NA	NA	NA	
	2/17/2011	329.64	31.81	ND	ND	297.83	ND(10)	ND(14)	ND(16)	ND(16)	23000	NA	NA	NA	NA	
	5/24/2011	329.64	30.56	ND	ND	299.08	ND(13)	ND(18)	ND(20)	ND(20)	16000	NA	NA	NA	NA	
	9/2/2011	329.64	33.22	ND	ND	296.42	4 J	ND(4)	ND(4)	ND(4)	7400	NA	NA	NA	NA	
	12/29/2011	329.64	31.29	ND	ND	298.35	ND(10)	ND(14)	ND(16)	ND(16)	9000	NA	NA	NA	NA	
	6/1/2012	329.64	31.77	ND	ND	297.87	7 J	21 J	ND(8)	34 J	4200	NA	NA	NA	NA	
	2/25/2013	329.64	33.03	ND	ND	296.61	ND(10)	ND(10)	ND(10)	ND(10)	1400	180	530	ND(10)	22	
	6/6/2013	329.64	32.46	ND	ND	297.18	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	770	NA	NA	NA	NA	
	12/18/2013	329.64	33.91	ND	ND	295.73	ND(5)	ND(5)	ND(5)	7	140	ND(80)	130	ND(5)	ND(5)	
	3/24/2014	329.64	31.19	ND	ND	298.45	ND(5)	ND(5)	ND(5)	ND(5)	41	ND(80)	25	ND(5)	ND(5)	
	6/20/2014	329.64	28.93	ND	ND	300.71	ND(1)	ND(1)	ND(1)	ND(1)	27	ND(20)	6	ND(1)	ND(1)	
	9/10/2014	329.64	30.90	ND	ND	298.74	ND(1)	ND(1)	ND(1)	ND(1)	26	ND(20)	13	ND(1)	ND(1)	
	12/9/2014	329.64	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	329.64	36.52	ND	ND	293.12	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Kend	lall Stati	stic			-1	1	0	7	-89	-4	-8	0	-4	

#### **Groundwater Monitoring & Analytical Data - Shallow Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-13	9/2/2011	332.00	34.37	ND	ND	297.63	5	ND(0.7)	ND(0.8)	5	6800	NA	NA	NA	NA	Screened from 25-45'
	12/29/2011	332.00	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	Well inaccessible
	6/1/2012	332.00	32.88	ND	ND	299.12	ND(5)	ND(7)	ND(8)	ND(8)	5700	NA	NA	NA	NA	
	2/25/2013	332.00	33.80	ND	ND	298.20	ND(25)	ND(25)	ND(25)	ND(25)	5300	ND(400)	150	ND(25)	80	
	6/6/2013	332.00	33.33	ND	ND	298.67	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1300	NA	NA	NA	NA	
	12/19/2013	332.00	34.43	ND	ND	297.57	ND(5)	ND(5)	ND(5)	ND(5)	1100	ND(80)	43	ND(5)	18	
	3/24/2014	332.00	32.29	ND	ND	299.71	ND(5)	ND(5)	ND(5)	ND(5)	21	ND(80)	ND(5)	ND(5)	ND(5)	
	6/19/2014	332.00	30.07	ND	ND	301.93	ND(1)	ND(1)	ND(1)	ND(1)	3	ND(20)	ND(1)	ND(1)	ND(1)	
	9/10/2014	332.00	32.95	ND	ND	299.05	ND(1)	ND(1)	ND(1)	ND(1)	7	ND(20)	ND(1)	ND(1)	ND(1)	
	12/9/2014	332.00	30.16	ND	ND	301.84	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	332.00	34.27	ND	ND	297.73	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	Mann-Kendall Statistic								0	-6	-21	0	0	0	0	

### **Groundwater Monitoring & Analytical Data - Shallow Wells**

				Gauging I	)ata					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-14	9/2/2011	331.81	35.02	ND	ND	296.79	54	ND(4)	ND(4)	55	170000	NA	NA	NA	NA	Screened from 25-45'
	12/29/2011	331.81	33.36	ND	ND	298.45	ND(50)	ND(70)	ND(80)	ND(80)	99000	NA	NA	NA	NA	
	6/1/2012	331.81	33.90	ND	ND	297.91	ND(50)	ND(70)	ND(80)	ND(80)	91000	NA	NA	NA	NA	
	2/25/2013	331.81	35.07	ND	ND	296.74	ND(50)	ND(50)	ND(50)	ND(50)	29000	2500	1100	ND(50)	450	
	6/6/2013	331.81	34.35	ND	ND	297.46	ND(1)	ND(1)	ND(2)	ND(2)	3600	NA	NA	NA	NA	
	12/19/2013	331.81	35.15	ND	ND	296.66	ND(5)	ND(5)	ND(5)	ND(5)	33	ND(80)	11	ND(5)	ND(5)	
	3/24/2014	331.82	32.91	ND	ND	298.91	ND(5)	ND(5)	ND(5)	ND(5)	14	ND(80)	ND(5)	ND(5)	ND(5)	
	6/19/2014	331.82	27.27	ND	ND	304.55	ND(1)	ND(1)	ND(1)	ND(1)	62	ND(20)	14	ND(1)	2	
	9/10/2014	331.82	24.65	ND	ND	307.17	ND(1)	ND(1)	ND(1)	ND(1)	190	ND(20)	5	ND(1)	3	
	12/9/2014	331.82	33.27	ND	ND	298.55	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	331.82	24.74	ND	ND	307.08	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Kend	lall Stati	stic			-8	0	0	-8	-26	0	0	0	0	

## **Groundwater Monitoring & Analytical Data - Shallow Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-15	9/2/2011	328.95	33.06	ND	ND	295.89	ND(0.5)	ND(0.7)	ND(0.8)	1 J	21000	NA	NA	NA	NA	Screened from 25-45'
	12/29/2011	328.95	31.10	ND	ND	297.85	ND(1)	ND(1)	ND(2)	ND(2)	1100	NA	NA	NA	NA	
	6/1/2012	328.95	31.64	ND	ND	297.31	ND(10)	ND(14)	ND(16)	ND(16)	14000	NA	NA	NA	NA	
	2/25/2013	328.95	33.10	ND	ND	295.85	ND(10)	ND(10)	ND(10)	ND(10)	1800	300	140	ND(10)	28	
	6/6/2013	328.95	32.32	ND	ND	296.63	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	120	NA	NA	NA	NA	
	12/18/2013	328.95	33.86	ND	ND	295.09	ND(10)	ND(10)	ND(10)	14	1700	260	210	ND(10)	27	
	3/25/2014	328.95	30.90	ND	ND	298.05	ND(5)	ND(5)	ND(5)	ND(5)	350	ND(80)	50	ND(5)	5	
	6/20/2014	328.95	28.74	ND	ND	300.21	ND(1)	ND(1)	ND(1)	ND(1)	42	ND(20)	17	ND(1)	ND(1)	
	9/10/2014	328.95	31.49	ND	ND	297.46	ND(1)	ND(1)	ND(1)	1	530	110	150	ND(1)	12	
	12/10/2014	328.95	38.19	ND	ND	290.76	ND(2)	ND(2)	ND(2)	5	2100	750	370	ND(2)	42	
	3/11/2015	328.95	36.23	ND	ND	292.72	ND(1)	ND(1)	ND(1)	ND(1)	63	ND(20)	21	ND(1)	ND(1)	
		Mann-Kend	dall Statis	stic			0	0	0	5	-23	-3	-1	0	-3	

### **Groundwater Monitoring & Analytical Data - Shallow Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-21S	4/11/2014	329.69	33.65	ND	ND	296.04	ND(10)	ND(10)	ND(10)	ND(10)	7500	6200	79	ND(10)	78	Screened from 26-46'
	6/18/2014	329.69	31.42	ND	ND	298.27	ND(1)	ND(1)	ND(1)	ND(1)	53	ND(20)	1	ND(1)	ND(1)	
	9/16/2014	329.69	34.26	ND	ND	295.43	ND(1)	ND(1)	ND(1)	ND(1)	130	31	4	ND(1)	1	
	12/10/2014	329.69	37.30	ND	ND	292.39	ND(1)	ND(1)	ND(1)	ND(1)	780	320	20	ND(1)	8	
	3/11/2015	329.69	37.33	ND	ND	292.36	ND(2)	ND(2)	ND(2)	ND(2)	910	610	17	ND(2)	8	
		Mann-Keno	dall Statis	stic			0	0	0	0	2	2	0	0	1	

### **Groundwater Monitoring & Analytical Data – Shallow Wells**

				Gauging I	<b>Data</b>					Analy	ical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-21I	4/11/2014	329.71	33.71	ND	ND	296.00	ND(2)	ND(2)	ND(2)	ND(2)	2500	1700	31	ND(2)	28	Screened from 56-66'
	6/18/2014	329.71	31.52	ND	ND	298.19	ND(1)	ND(1)	ND(1)	ND(1)	1700	910	26	ND(1)	18	
	9/16/2014	329.71	34.35	ND	ND	295.36	ND(1)	ND(1)	ND(1)	ND(1)	2100	1500	29	ND(1)	26	
	12/10/2014	329.71	37.40	ND	ND	292.31	ND(1)	ND(1)	ND(1)	ND(1)	1900	1400	29	ND(1)	24	
	3/11/2015	329.71	37.40	ND	ND	292.31	ND(2)	ND(2)	ND(2)	ND(2)	1300	1000	22	ND(2)	15	
		Mann-Keno	lall Statis	stic			0	0	0	0	-6	-4	-5	0	-6	

### **Groundwater Monitoring & Analytical Data - Shallow Wells**

				Gauging I	)ata					Analy	ical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-22	4/11/2014	320.97	28.55	ND	ND	292.42	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	Screened from 20-40'
	6/18/2014	320.97	25.75	ND	ND	295.22	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	9/2/2014	320.97	27.48	ND	ND	293.49	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	12/9/2014	320.97	30.54	ND	ND	290.43	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	320.97	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Keno	lall Statis	stic			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

### **Groundwater Monitoring & Analytical Data – Shallow Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-24	4/11/2014	324.49	27.66	ND	ND	296.83	ND(1)	1	ND(1)	ND(1)	29	ND(20)	1	ND(1)	ND(1)	Screened from 50-60'
	6/18/2014	324.49	26.39	ND	ND	298.10	ND(1)	ND(1)	ND(1)	ND(1)	21	ND(20)	ND(1)	ND(1)	ND(1)	
	9/3/2014	324.49	29.30	ND	ND	295.19	ND(1)	ND(1)	ND(1)	ND(1)	21	ND(20)	ND(1)	ND(1)	ND(1)	
	12/9/2014	324.49	33.93	ND	ND	290.56	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	324.49	33.66	ND	ND	290.83	ND(1)	ND(1)	ND(1)	ND(1)	2	ND(20)	ND(1)	ND(1)	ND(1)	
		Mann-Keno	dall Statis	stic			0	-2	0	0	-2	0	-2	0	0	

## **Groundwater Monitoring & Analytical Data - Shallow Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-27S	8/26/2014	323.40	28.42	ND	ND	294.98	ND(1)	ND(1)	ND(1)	ND(1)	1	ND(20)	ND(1)	ND(1)	ND(1)	
	9/2/2014	323.40	28.88	ND	ND	294.52	ND(1)	ND(1)	ND(1)	ND(1)	1	ND(20)	ND(1)	ND(1)	ND(1)	
	12/9/2014	323.40	32.28	ND	ND	291.12	ND(1)	ND(1)	ND(1)	ND(1)	2	ND(20)	ND(1)	ND(1)	ND(1)	
	3/11/2015	323.40	32.35	ND	ND	291.05	ND(1)	ND(1)	ND(1)	ND(1)	1	ND(20)	ND(1)	ND(1)	ND(1)	
		Mann-Keno	lall Stati	stic		·	0	0	0	0	1	0	0	0	0	

## **Groundwater Monitoring & Analytical Data - Shallow Wells**

				Gauging I	<b>Data</b>					Analy	ical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-27I	8/26/2014	323.35	28.26	ND	ND	295.09	ND(1)	ND(1)	ND(1)	ND(1)	1	ND(20)	ND(1)	ND(1)	ND(1)	
	9/2/2014	323.35	27.69	ND	ND	295.66	ND(1)	ND(1)	ND(1)	ND(1)	1	ND(20)	ND(1)	ND(1)	ND(1)	
	12/9/2014	323.35	32.31	ND	ND	291.04	ND(1)	ND(1)	ND(1)	ND(1)	1	ND(20)	ND(1)	ND(1)	ND(1)	
	3/11/2015	323.35	32.39	ND	ND	290.96	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
		Mann-Keno	dall Stati	stic			0	0	0	0	-3	0	0	0	0	

## **Groundwater Monitoring & Analytical Data - Shallow Wells**

				Gauging I	)ata					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
W-1	1/18/2003	328.53	33.83	ND	ND	294.70	ND(5)	ND(5)	ND(5)	ND(10)	13000	9100	81	ND(5)	240	Screened from 10-40'
	8/5/2008	328.53	34.81	ND	ND	293.72	9.6	ND(5.0)	ND(5.0)	ND(5.0)	5200	NA	NA	NA	NA	
	6/7/2013	328.53	34.52	ND	ND	294.01	ND(10)	ND(14)	ND(16)	ND(16)	26000	NA	NA	NA	NA	
	12/19/2013	328.53	36.11	ND	ND	292.42	ND(100)	ND(100)	ND(100)	ND(100)	13000	6900	150	ND(100)	130	
	3/25/2014	328.53	33.50	ND	ND	295.03	ND(25)	ND(25)	ND(25)	ND(25)	16000	15000	170	ND(25)	170	
	6/19/2014	328.53	29.91	ND	ND	298.62	ND(50)	ND(50)	ND(50)	ND(50)	15000	13000	130	ND(50)	140	
	9/3/2014	328.53	31.77	ND	ND	296.76	ND(20)	ND(20)	ND(20)	ND(20)	13000	8900	95	ND(20)	100	
	12/10/2014	328.53	36.07	ND	ND	292.46	ND(20)	ND(20)	ND(20)	ND(20)	18000	14000	170	ND(20)	170	
	3/12/2015	328.53	35.89	ND	ND	292.64	ND(20)	ND(20)	ND(20)	ND(20)	11000	9100	120	ND(20)	110	
		Mann-Kend	lall Stati	stic			-6	0	0	0	1	0	0	0	-6	

### **Groundwater Monitoring & Analytical Data – Shallow Wells**

				Gauging I	)ata					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
W-2	1/18/2003	329.47	34.56	ND	ND	294.91	ND(5)	ND(5)	ND(5)	ND(10)	100	ND(100)	ND(5)	ND(5)	ND(5)	Screened from 10-40'
	8/5/2008	329.47	35.53	ND	ND	293.94	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	320	NA	NA	NA	NA	
	6/7/2013	329.47	35.30	ND	ND	294.17	ND(5)	ND(7)	ND(8)	ND(8)	14000	NA	NA	NA	NA	
	12/19/2013	329.47	36.82	ND	ND	292.65	ND(50)	ND(50)	ND(50)	ND(50)	7700	ND(800)	130	ND(50)	74	
	3/25/2014	329.47	34.26	ND	ND	295.21	ND(100)	ND(100)	ND(100)	ND(100)	7000	ND(1600)	130	ND(100)	ND(100)	
	6/19/2014	329.47	30.74	ND	ND	298.73	ND(10)	ND(10)	ND(10)	ND(10)	5000	ND(200)	39	ND(10)	38	
	9/3/2014	329.47	32.64	ND	ND	296.83	ND(10)	ND(10)	ND(10)	ND(10)	3900	ND(200)	21	ND(10)	27	
	12/10/2014	329.47	36.75	ND	ND	292.72	ND(2)	ND(2)	ND(2)	ND(2)	2100	ND(40)	25	ND(2)	18	
	3/11/2015	329.47	36.74	ND	ND	292.73	ND(2)	ND(2)	ND(2)	ND(2)	1000	84	20	ND(2)	9	
		Mann-Kend	lall Statis	stic			0	0	0	0	-6	0	-1	0	1	

### **Groundwater Monitoring & Analytical Data - Shallow Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
W-3	1/18/2003	330.14	35.88	ND	ND	294.26	ND(5)	ND(5)	ND(5)	ND(10)	ND(5)	ND(100)	ND(5)	ND(5)	ND(5)	Screened from 10-45'
	8/5/2008	330.14	35.92	ND	ND	294.22	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	22	NA	NA	NA	NA	
	6/7/2013	330.14	35.84	ND	ND	294.30	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	2 J	NA	NA	NA	NA	
	12/18/2013	330.14	37.22	ND	ND	292.92	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	3/24/2014	330.14	34.57	ND	ND	295.57	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	6/19/2014	330.14	31.08	ND	ND	299.06	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	9/3/2014	330.14	33.20	ND	ND	296.94	ND(1)	ND(1)	ND(1)	ND(1)	1	ND(20)	ND(1)	ND(1)	ND(1)	
	12/9/2014	330.14	37.11	ND	ND	293.03	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	330.14	35.61	ND	ND	294.53	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Kend	lall Statis	stic		·	0	0	0	0	-1	N/A	N/A	N/A	N/A	

### **Groundwater Monitoring & Analytical Data - Shallow Wells**

				Gauging I	)ata					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
W-4	1/18/2003	327.67	34.12	ND	ND	293.55	71	920	850	8700	55	790	ND(5)	ND(5)	ND(5)	Screened from 10-40'
	8/5/2008	327.67	34.25	ND	ND	293.42	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	22	NA	NA	NA	NA	
	6/7/2013	327.67	34.08	ND	ND	293.59	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	12/18/2013	327.67	35.91	ND	ND	291.76	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	3/24/2014	327.67	33.24	ND	ND	294.43	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	6/19/2014	327.67	29.62	ND	ND	298.05	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	9/8/2014	327.67	31.54	ND	ND	296.13	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12/9/2014	327.67	35.98	ND	ND	291.69	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	327.67	35.09	ND	ND	292.58	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Kend	lall Statis	stic			-3	-3	-3	-3	-5	N/A	N/A	N/A	N/A	

### **Groundwater Monitoring & Analytical Data - Shallow Wells**

				Gauging I	)ata					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
W-5	8/5/2008	327.81	35.93	ND	ND	291.88	320	3000	3000	16000	ND(5.0)	NA	NA	NA	NA	Interval not available
	6/7/2013	327.81	35.30	ND	ND	292.51	180	96	270	11000	ND(0.5)	NA	NA	NA	NA	
	12/18/2013	327.81	37.46	ND	ND	290.35	290	160	860	6000	ND(13)	ND(200)	ND(13)	ND(13)	ND(13)	
	3/24/2014	327.81	34.75	ND	ND	293.06	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	6/19/2014	327.81	31.23	ND	ND	296.58	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	9/8/2014	327.81	31.98	ND	ND	295.83	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12/9/2014	327.81	37.19	ND	ND	290.62	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	327.81	37.15	ND	ND	290.66	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Kend	lall Statis	stic		·	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

### **Groundwater Monitoring & Analytical Data - Shallow Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	to	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
W-6	8/5/2008	325.21	31.63	ND	ND	293.58	ND(5.0)	ND(5.0)	ND(5.0)	18.6	16	NA	NA	NA	NA	Interval not available
	6/7/2013	325.21	31.12	ND	ND	294.09	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	6	NA	NA	NA	NA	
	12/18/2013	325.21	32.12	ND	ND	293.09	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	3/25/2014	325.21	29.37	ND	ND	295.84	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	6/18/2014	325.21	26.56	ND	ND	298.65	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	9/3/2014	325.21	26.98	ND	ND	298.23	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	12/9/2014	325.21	30.37	ND	ND	294.84	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	3/11/2015	325.21	25.36	ND	ND	299.85	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
_		Mann-Kend	lall Statis	stic			0	0	0	-7	-13	0	0	0	0	

## **Groundwater Monitoring & Analytical Data - Shallow Wells**

				Gauging I	)ata					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
W-7	8/5/2008	329.77	37.35	ND	ND	292.42	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	16	NA	NA	NA	NA	Interval not available
	6/6/2013	329.77	37.04	ND	ND	292.73	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	12/18/2013	329.77	38.24	ND	ND	291.53	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	3/24/2014	329.77	35.60	ND	ND	294.17	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	6/18/2014	329.77	32.49	ND	ND	297.28	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	9/3/2014	329.77	34.24	ND	ND	295.53	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	12/9/2014	329.77	37.70	ND	ND	292.07	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	3/10/2015	329.77	37.74	ND	ND	292.03	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
_		Mann-Kend	lall Stati	stic			0	0	0	0	-7	0	0	0	0	

### **Groundwater Monitoring & Analytical Data – Shallow Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
GFSCMW-2	3/24/2014	316.79	30.18	ND	ND	286.61	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	Interval not available
	6/19/2014	316.79	29.12	ND	ND	287.67	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	9/4/2014	316.79	27.99	ND	ND	288.80	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12/9/2014	316.79	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015 316.79 NM NM NM							NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Keno	dall Statis	stic			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

### **Groundwater Monitoring & Analytical Data – Shallow Wells**

				Gauging I	)ata					Analyt	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
GFSCMW-3	3/24/2014	319.78	29.14	ND	ND	290.64	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	Interval not available
	6/19/2014	319.78	28.42	ND	ND	291.36	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	9/4/2014	319.78	27.24	ND	ND	292.54	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12/9/2014	319.78	34.56	ND	ND	285.22	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	319.78	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Keno	dall Statis	stic			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

### **Groundwater Monitoring & Analytical Data – Shallow Wells**

				Gauging I	)ata					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
GFGPMW-4	3/24/2014	310.10	18.87	ND	ND	291.23	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	Screened from 5.5-20.5'
	6/19/2014	310.10	17.21	ND	ND	292.89	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	9/4/2014	310.10	18.39	ND	ND	291.71	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12/9/2014	310.10	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	310.10	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Keno	dall Statis	stic			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

### **Groundwater Monitoring & Analytical Data – Shallow Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
GFGPMW-5	3/24/2014	310.72	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	Screened from 5-25'
	6/19/2014	310.72	DRY	DRY	DRY	DRY	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	9/4/2014	310.72	22.31	ND	ND	288.41	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12/9/2014	310.72	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	310.72	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Kend	dall Stati	stic			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

### **Groundwater Monitoring & Analytical Data – Shallow Wells**

Inactive Fairfax Facility #26140 9901 Georgetown Pike Great Falls, Virginia January 18, 2003 through March 12, 2015

#### Notes:

 $\mu$ g/L - micrograms per liter ( $\mu$ g/L)

CMT - Continuous Multichannel Tubing

DIPE - Isopropyl ether

ETBE - Ethyl tert-butyl ether

GW - Groundwater

J - Indicates an estimated value

MTBE - Methyl Tertiary Butyl Ether

NA - Not analyzed

ND - Not detected

ND(5.0) - Not detected at or above the laboratory reporting limit, laboratory reporting limit included.

NM - Not monitored

NS - Not sampled

NSVD - Not surveyed to vertical datum

TAME - Tert-Amyl methyl ether

TBA - Tert-Butyl alcohol

Table 4
Groundwater Monitoring & Analytical Data – Deep Wells

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-6D(65)	6/22/2010	323.09	26.69	ND	ND	296.40	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1	NA	NA	NA	NA	Open from 70-120'
	9/30/2010	323.09	26.52	ND	ND	296.57	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1	NA	NA	NA	NA	
	12/16/2010	323.09	25.92	ND	ND	297.17	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1	NA	NA	NA	NA	
	2/17/2011	323.09	26.14	ND	ND	296.95	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	5/24/2011	323.09	25.83	ND	ND	297.26	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	9/2/2011	323.09	27.45	ND	ND	295.64	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.9 J	NA	NA	NA	NA	
	12/22/2011	323.09	25.47	ND	ND	297.62	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.8 J	NA	NA	NA	NA	
	6/1/2012	323.09	25.95	ND	ND	297.14	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.8 J	NA	NA	NA	NA	
	2/25/2013	323.09	27.13	ND	ND	295.96	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	6/6/2013	323.09	26.66	ND	ND	296.43	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	12/17/2013	323.09	27.85	ND	ND	295.24	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/24/2014	323.09	25.24	ND	ND	297.85	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	6/18/2014	323.09	23.37	ND	ND	299.72	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	9/8/2014	323.09	26.15	ND	ND	296.94	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12/9/2014	323.09	29.34	ND	ND	293.75	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	323.09	28.85	ND	ND	294.24	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Kend	dall Statis	stic			0	0	0	0	-33	N/A	N/A	N/A	N/A	

### **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	)ata					Analyt	ical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	(µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-6D(75)	9/24/2009	NM	NM	NM	NM	NM	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	3.0	ND(25)	0.56	ND(5.0)	ND(5.0)	
	10/15/2009	323.09	26.69	ND	ND	296.40	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	2.8	ND(25)	0.49	ND(5.0)	ND(5.0)	
		Mann-Keno	lall Stati	stic			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	)ata					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-6D(85)	6/22/2010	323.09	26.69	ND	ND	296.40	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1	NA	NA	NA	NA	
	9/30/2010	323.09	26.51	ND	ND	296.58	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1	NA	NA	NA	NA	
	12/16/2010	323.09	25.92	ND	ND	297.17	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	6	NA	NA	NA	NA	
	2/17/2011	323.09	26.14	ND	ND	296.95	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	5/24/2011	323.09	25.83	ND	ND	297.26	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	9/2/2011	323.09	27.45	ND	ND	295.64	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.9 J	NA	NA	NA	NA	
	12/22/2011	323.09	25.47	ND	ND	297.62	ND(0.5)	1 J	ND(0.8)	ND(0.8)	0.8 J	NA	NA	NA	NA	
	6/1/2012	323.09	25.95	ND	ND	297.14	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.8 J	NA	NA	NA	NA	
	2/25/2013	323.09	27.13	ND	ND	295.96	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	6/6/2013	323.09	26.66	ND	ND	296.43	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	6/18/2014	323.09	23.37	ND	ND	299.72	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	3/12/2015	323.09	28.85	ND	ND	294.24	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Kend	lall Statis	stic			0	2	0	0	-41	N/A	N/A	N/A	N/A	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	)ata					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-6D(105)	6/22/2010	323.09	26.69	ND	ND	296.40	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	2 J	NA	NA	NA	NA	
	9/30/2010	323.09	26.52	ND	ND	296.57	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1	NA	NA	NA	NA	
	12/16/2010	323.09	25.92	ND	ND	297.17	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1	NA	NA	NA	NA	
	2/17/2011	323.09	26.14	ND	ND	296.95	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	5/24/2011	323.09	25.83	ND	ND	297.26	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	1 J	NA	NA	NA	NA	
	9/2/2011	323.09	27.45	ND	ND	295.64	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.9 J	NA	NA	NA	NA	
	12/22/2011	323.09	25.47	ND	ND	297.62	ND(0.5)	1 J	ND(0.8)	ND(0.8)	0.9 J	NA	NA	NA	NA	
	6/1/2012	323.09	25.95	ND	ND	297.14	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	0.9 J	NA	NA	NA	NA	
	2/25/2013	323.09	27.13	ND	ND	295.96	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	6/6/2013	323.09	26.66	ND	ND	296.43	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	6/18/2014	323.09	23.37	ND	ND	299.72	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	3/12/2015	323.09	28.85	ND	ND	294.24	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Kend	lall Statis	stic			0	2	0	0	-43	N/A	N/A	N/A	N/A	

### **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-6D(110)	9/24/2009	NM	NM	NM	NM	NM	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	3.0	ND(25)	0.57	ND(5.0)	ND(5.0)	
	10/15/2009	323.09	26.69	ND	ND	296.40	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	2.8	ND(25)	0.50	ND(5.0)	ND(5.0)	
	]	Mann-Keno	dall Stati	stic			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

### **Groundwater Monitoring & Analytical Data – Deep Wells**

Inactive Fairfax Facility #26140 9901 Georgetown Pike Great Falls, Virginia August 17, 2009 through March 27, 2015

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-12D(110)	5/24/2011	326.43	28.12	ND	ND	298.31	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	Open from 100-160'
	9/2/2011	326.43	32.37	ND	ND	294.06	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	12/22/2011	326.43	29.63	ND	ND	296.80	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	6/1/2012	326.43	29.75	ND	ND	296.68	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	2/25/2013	326.43	30.86	ND	ND	295.57	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	6/6/2013	326.43	30.59	ND	ND	295.84	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	12/17/2013	326.43	31.51	ND	ND	294.92	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/24/2014	326.43	29.33	ND	ND	297.10	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	6/18/2014	326.43	25.98	ND	ND	300.45	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
		Mann-Kend	lall Statis	stic			0	0	0	0	0	N/A	N/A	N/A	N/A	

Ref.: rpt\_gaug\_w\_9\_aq\VA 26140 GW Table\1350\26140\_DEEP

1340 Charwood Road, Suite I, Hanover, MD

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	)ata					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-12D(153)	5/24/2011	326.43	28.12	ND	ND	298.31	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	Open from 100-160'
	9/2/2011	326.43	32.37	ND	ND	294.06	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	6/1/2012	326.43	29.75	ND	ND	296.68	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	2/25/2013	326.43	30.86	ND	ND	295.57	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	
	6/6/2013	326.43	30.59	ND	ND	295.84	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	6/18/2014	326.43	25.98	ND	ND	300.45	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
		Mann-Keno	dall Stati	stic			0	0	0	0	0	N/A	N/A	N/A	N/A	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	)ata					Analyt	ical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	(µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-16D(89)	12/22/2011	332.90	34.88	ND	ND	298.02	ND(3)	ND(4)	ND(4)	ND(4)	2600	NA	NA	NA	NA	
		Mann-Kend	lall Stati	stic			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

### **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-16D(95)	6/1/2012	332.90	35.33	ND	ND	297.57	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	140	NA	NA	NA	NA	Abandoned to 110' (April 2011)
	2/25/2013	332.90	36.83	ND	ND	296.07	ND(100)	ND(100)	ND(100)	ND(100)	9800	ND(1600)	360	ND(100)	200	Open from 85-110'
	6/6/2013	332.90	36.15	ND	ND	296.75	18 J	ND(7)	ND(8)	ND(8)	11000	NA	NA	NA	NA	
	12/19/2013	332.90	37.13	ND	ND	295.77	ND(130)	ND(130)	ND(130)	ND(130)	19000	2800	770	ND(130)	390	
	3/25/2014	332.90	34.64	ND	ND	298.26	25	ND(25)	ND(25)	ND(25)	14000	2000	520	ND(25)	300	
	6/19/2014	332.90	32.75	ND	ND	300.15	28	ND(20)	ND(20)	ND(20)	13000	1100	660	ND(20)	280	
	9/3/2014	332.90	36.14	ND	ND	296.76	6	ND(5)	ND(5)	ND(5)	3600	450	140	ND(5)	69	
	12/9/2014	332.90	40.36	ND	ND	292.54	ND(5)	ND(5)	ND(5)	ND(5)	2100	ND(100)	29	ND(5)	19	
	3/9/2015	NM	NM	NM	NM	NM	ND(2)	ND(2)	ND(2)	ND(2)	1300	290	67	ND(2)	17	
		Mann-Kend	lall Statis	stic		·	2	0	0	0	-6	-2	-2	0	-4	

### **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	<b>Data</b>					Analyt	ical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-16D(110)	12/22/2011	332.90	34.88	ND	ND	298.02	ND(3)	ND(4)	ND(4)	ND(4)	2600	NA	NA	NA	NA	Abandoned to 110' (April 2011)
		Mann-Kend	lall Stati	stic			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

### **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	)ata					Analyt	ical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-16D(125)	12/22/2011	332.90	34.88	ND	ND	298.02	ND(3)	ND(4)	ND(4)	ND(4)	2500	NA	NA	NA	NA	Abandoned to 110' (April 2011)
		Mann-Keno	lall Stati	stic			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-17D(75)	4/25/2014	328.84	30.77	ND	ND	298.07	ND(100)	ND(100)	ND(100)	ND(100)	120000	39000	2000	ND(100)	1900	CMT
	6/11/2014	328.84	29.81	ND	ND	299.03	ND(1)	ND(1)	ND(1)	ND(1)	20	ND(20)	2	ND(1)	ND(1)	
	9/2/2014	328.84	31.70	ND	ND	297.14	ND(1)	ND(1)	ND(1)	ND(1)	190	ND(20)	31	ND(1)	2	
	12/8/2014	328.84	49.65	ND	ND	279.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12/9/2014	328.84	NM	NM	NM	NM	21	ND(20)	ND(20)	ND(20)	37000	8300	860	ND(20)	600	
	3/9/2015	328.84	42.23	ND	ND	286.61	ND(20)	ND(20)	ND(20)	ND(20)	23000	4900	300	ND(20)	210	
		Mann-Keno	dall Statis	stic			3	0	0	0	0	-1	0	0	0	

### **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	)ata					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-17D(81)	4/25/2014	328.84	28.89	ND	ND	299.95	ND(100)	ND(100)	ND(100)	ND(100)	92000	23000	1700	ND(100)	1400	CMT
	6/11/2014	328.84	30.72	ND	ND	298.12	ND(10)	ND(10)	ND(10)	ND(10)	5000	1800	70	ND(10)	60	
	9/2/2014	328.84	31.13	ND	ND	297.71	ND(1)	ND(1)	ND(1)	ND(1)	10	ND(20)	2	ND(1)	ND(1)	
	12/8/2014	328.84	50.40	ND	ND	278.44	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12/9/2014	328.84	NM	NM	NM	NM	ND(10)	ND(10)	ND(10)	ND(10)	5900	2800	89	ND(10)	73	
	3/9/2015	328.84	42.25	ND	ND	286.59	ND(1)	ND(1)	ND(1)	ND(1)	14	ND(20)	2	ND(1)	ND(1)	
		Mann-Keno	dall Statis	stic			0	0	0	0	-2	-2	-2	0	-2	

### **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	)ata					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-17D(87.75)	4/25/2014	328.84	30.93	ND	ND	297.91	ND(50)	ND(50)	ND(50)	ND(50)	40000	11000	700	ND(50)	620	CMT
	6/11/2014	328.84	29.96	ND	ND	298.88	ND(25)	ND(25)	ND(25)	ND(25)	12000	2600	240	ND(25)	170	
	9/2/2014	328.84	31.57	ND	ND	297.27	ND(1)	ND(1)	ND(1)	ND(1)	250	61	6	ND(1)	3	
	12/8/2014	328.84	34.62	ND	ND	294.22	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12/9/2014	328.84	NM	NM	NM	NM	ND(20)	ND(20)	ND(20)	ND(20)	25000	1200	360	ND(20)	290	
	3/9/2015	328.84	36.27	ND	ND	292.57	ND(1)	ND(1)	ND(1)	ND(1)	80	21	3	ND(1)	ND(1)	
		Mann-Kend	dall Statis	stic			0	0	0	0	-2	-4	-2	0	-2	

### **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	)ata					Analyt	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-17D(92)	4/25/2014	328.84	30.94	ND	ND	297.90	ND(25)	ND(25)	ND(25)	ND(25)	15000	3200	370	ND(25)	270	CMT
	6/10/2014	328.84	29.95	ND	ND	298.89	ND(10)	ND(10)	ND(10)	ND(10)	11000	2200	320	ND(10)	200	
	9/2/2014	328.84	32.84	ND	ND	296.00	ND(10)	ND(10)	ND(10)	ND(10)	11000	3300	200	ND(10)	130	
	12/8/2014	328.84	37.26	ND	ND	291.58	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12/9/2014	328.84	NM	NM	NM	NM	ND(20)	ND(20)	ND(20)	ND(20)	32000	12000	600	ND(20)	390	
	3/9/2015	328.84	37.04	ND	ND	291.80	ND(3)	ND(3)	ND(3)	ND(3)	620	220	16	ND(3)	8	
		Mann-Keno	dall Statis	stic			0	0	0	0	1	4	0	0	0	

### **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	<b>Data</b>					Analyt	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-17D(117)	4/25/2014	328.84	31.35	ND	ND	297.49	ND(100)	ND(100)	ND(100)	ND(100)	120000	31000	2300	ND(100)	1800	CMT
	6/10/2014	328.84	30.58	ND	ND	298.26	ND(50)	ND(50)	ND(50)	ND(50)	54000	14000	1000	ND(50)	740	
	9/3/2014	328.84	32.99	ND	ND	295.85	ND(50)	ND(50)	ND(50)	ND(50)	23000	5500	450	ND(50)	300	
	12/8/2014	328.84	38.28	ND	ND	290.56	ND(5)	ND(5)	ND(5)	ND(5)	5000	1400	130	ND(5)	76	
	3/10/2015	328.84	37.65	ND	ND	291.19	ND(20)	ND(20)	ND(20)	ND(20)	8700	3300	350	ND(20)	120	
		Mann-Kend	dall Statis	stic			0	0	0	0	-8	-8	-8	0	-8	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	<b>Data</b>					Analyt	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-17D(129.75)	4/25/2014	328.84	32.77	ND	ND	296.07	ND(100)	ND(100)	ND(100)	ND(100)	120000	30000	2300	ND(100)	1800	CMT
ĺ	6/10/2014	328.84	31.59	ND	ND	297.25	ND(50)	ND(50)	ND(50)	ND(50)	49000	17000	830	ND(50)	690	
<b>l</b> [	9/3/2014	328.84	33.61	ND	ND	295.23	ND(100)	ND(100)	ND(100)	ND(100)	80000	23000	1400	ND(100)	990	
[	12/8/2014	328.84	38.10	ND	ND	290.74	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Ì	12/9/2014	328.84	NM	NM	NM	NM	ND(50)	ND(50)	ND(50)	ND(50)	69000	21000	1500	ND(50)	1000	
	3/10/2015	328.84	43.87	ND	ND	284.97	ND(10)	ND(10)	ND(10)	ND(10)	12000	3300	360	ND(10)	180	
		Mann-Keno	dall Statis	stic			0	0	0	0	-2	-2	0	0	0	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	)ata					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-17D(147)	4/25/2014	328.84	33.41	ND	ND	295.43	ND(100)	ND(100)	ND(100)	ND(100)	98000	30000	2000	ND(100)	1500	CMT
	6/11/2014	328.84	31.96	ND	ND	296.88	ND(100)	ND(100)	ND(100)	ND(100)	82000	22000	1500	ND(100)	1200	
	9/3/2014	328.84	33.92	ND	ND	294.92	6	ND(1)	ND(1)	ND(1)	55000	16000	790	ND(1)	570	
	12/8/2014	328.84	37.99	ND	ND	290.85	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	12/9/2014	328.84	NM	NM	NM	NM	ND(50)	ND(50)	ND(50)	ND(50)	70000	21000	1500	ND(50)	1000	
	3/10/2015	328.84	49.26	ND	ND	279.58	ND(50)	ND(50)	ND(50)	ND(50)	25000	9500	470	ND(50)	280	
		Mann-Keno	dall Statis	stic			1	0	0	0	-4	-4	-3	0	-4	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	)ata					Analy	ical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-18D	5/10/2013	334.88	40.57	ND	ND	294.31	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(80)	ND(5)	ND(5)	ND(5)	Open from 97-136'
	6/6/2013	334.88	40.69	ND	ND	294.19	ND(0.5)	ND(0.7)	ND(0.8)	ND(0.8)	ND(0.5)	NA	NA	NA	NA	
	12/18/2013	334.88	41.60	ND	ND	293.28	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/24/2014	334.88	38.94	ND	ND	295.94	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	6/18/2014	334.88	36.04	ND	ND	298.84	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	9/3/2014	334.88	38.14	ND	ND	296.74	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	12/9/2014	334.88	42.23	ND	ND	292.65	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	334.88	42.19	ND	ND	292.69	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Kend	lall Statis	stic		·	0	0	0	0	0	N/A	N/A	N/A	N/A	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	)ata					Analyt	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-19D	3/28/2014	341.91	43.16	ND	ND	298.75	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	6/20/2014	341.91	41.11	ND	ND	300.80	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	9/4/2014	341.91	43.36	ND	ND	298.55	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	12/9/2014	341.91	47.56	ND	ND	294.35	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	341.91	48.76	ND	ND	293.15	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Kend	lall Statis	stic			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	)ata					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-20D(73-83)	4/11/2014	329.57	NM	NM	NM	NM	ND(1)	ND(1)	ND(1)	ND(1)	72	32	2	ND(1)	ND(1)	
	7/10/2014	329.57	NM	NM	NM	NM	ND(1)	ND(1)	ND(1)	ND(1)	100	28	3	ND(1)	ND(1)	
	8/26/2014	329.57	31.26	ND	ND	298.31	ND(1)	ND(1)	ND(1)	ND(1)	100	34	2	ND(1)	ND(1)	
	9/2/2014	329.57	33.62	ND	ND	295.95	ND(1)	ND(1)	ND(1)	ND(1)	120	27	3	ND(1)	1	
	12/9/2014	329.57	36.52	ND	ND	293.05	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	329.57	38.02	ND	ND	291.55	ND(2)	ND(2)	ND(2)	ND(2)	740	340	15	ND(2)	8	
	3/27/2015	329.57	37.51	ND	ND	292.06	ND(1)	ND(1)	ND(1)	ND(1)	1400	480	24	ND(1)	18	
		Mann-Kend	lall Statis	stic			0	0	0	0	9	2	6	0	7	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-20D(90-100)	4/11/2014	329.58	NM	NM	NM	NM	ND(1)	ND(1)	ND(1)	ND(1)	55	24	1	ND(1)	ND(1)	
	7/10/2014	329.58	NM	NM	NM	NM	ND(1)	ND(1)	ND(1)	ND(1)	73	21	2	ND(1)	ND(1)	
	8/26/2014	329.58	32.88	ND	ND	296.70	ND(1)	ND(1)	ND(1)	ND(1)	75	26	1	ND(1)	ND(1)	
	9/2/2014	329.58	34.25	ND	ND	295.33	ND(1)	ND(1)	ND(1)	ND(1)	2	ND(20)	ND(1)	ND(1)	ND(1)	
	12/9/2014	329.58	37.24	ND	ND	292.34	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	329.58	38.22	ND	ND	291.36	ND(1)	ND(1)	ND(1)	ND(1)	1	ND(20)	ND(1)	ND(1)	ND(1)	
		Mann-Kend	lall Statis	stic			0	0	0	0	0	-2	-3	0	0	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	<b>Data</b>					Analyt	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-20D(110)	4/11/2014	329.80	NM	NM	NM	NM	ND(1)	ND(1)	ND(1)	ND(1)	37	ND(20)	ND(1)	ND(1)	ND(1)	Hydrasleeve
	7/10/2014	329.80	NM	NM	NM	NM	ND(1)	ND(1)	ND(1)	ND(1)	43	ND(20)	1	ND(1)	ND(1)	
		Mann-Keno	lall Statis	stic			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	<b>Data</b>					Analyt	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-20D(132-142)	4/11/2014	329.56	NM	NM	NM	NM	ND(1)	ND(1)	ND(1)	ND(1)	32	ND(20)	ND(1)	ND(1)	ND(1)	
	7/10/2014	329.56	NM	NM	NM	NM	ND(1)	ND(1)	ND(1)	ND(1)	55	ND(20)	1	ND(1)	ND(1)	
	8/26/2014	329.56	33.85	ND	ND	295.71	ND(1)	ND(1)	ND(1)	ND(1)	130	42	2	ND(1)	1	
	9/2/2014	329.56	34.36	ND	ND	295.20	ND(1)	ND(1)	ND(1)	ND(1)	100	38	3	ND(1)	ND(1)	
Ì	12/9/2014	329.56	38.19	ND	ND	291.37	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	329.56	38.26	ND	ND	291.30	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
		Mann-Keno	dall Statis	stic			0	0	0	0	4	3	6	0	1	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	<b>Data</b>					Analyt	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-23D	5/19/2014	324.81	27.72	ND	ND	297.09	ND(10)	ND(10)	ND(10)	ND(10)	8000	1800	260	ND(10)	120	Screened from 90-100'
	6/10/2014	324.81	27.34	ND	ND	297.47	ND(20)	ND(20)	ND(20)	ND(20)	11000	2200	340	ND(20)	180	
	6/19/2014	324.81	27.19	ND	ND	297.62	ND(10)	ND(10)	ND(10)	ND(10)	5100	ND(200)	130	ND(10)	57	
	8/20/2014	324.81	28.42	ND	ND	296.39	ND(10)	ND(10)	ND(10)	ND(10)	10000	2100	270	ND(10)	140	
	9/3/2014	324.81	29.86	ND	ND	294.95	ND(20)	ND(20)	ND(20)	ND(20)	9300	1700	280	ND(20)	130	
	9/22/2014	324.81	32.83	ND	ND	291.98	ND(5)	ND(5)	ND(5)	ND(5)	4600	950	NA	NA	NA	
	10/21/2014	324.81	33.46	ND	ND	291.35	ND(10)	ND(10)	ND(10)	ND(10)	4100	790	120	ND(10)	68	
	12/10/2014	324.81	34.79	ND	ND	290.02	ND(1)	ND(1)	ND(1)	ND(1)	400	24	21	ND(1)	6	
	3/11/2015	324.81	33.63	ND	ND	291.18	ND(1)	27	ND(1)	2	200	32	11	ND(1)	2	
		Mann-Kend	lall Statis	stic			0	8	0	8	-26	-18	-9	0	-9	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	)ata					Analyt	ical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-25D(76)	8/20/2014	323.92	22.06	ND	ND	301.86	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	Open from 65-101'
	9/2/2014	317.18	22.63	ND	ND	294.55	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	3/10/2015	317.18	23.25	ND	ND	293.93	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Keno	lall Stati	stic			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-25D(90)	8/20/2014	323.92	22.06	ND	ND	301.86	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	9/2/2014	317.18	22.63	ND	ND	294.55	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	12/9/2014	317.18	25.04	ND	ND	292.14	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	3/10/2015	317.18	23.25	ND	ND	293.93	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
		Mann-Kend	dall Stati	stic			0	0	0	0	0	0	0	0	0	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	<b>Data</b>					Analyt	ical Data					
Well ID	Date	Top of Casing Elevation (feet)	to	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-25D(98)	8/20/2014	323.92	22.06	ND	ND	301.86	ND(1)	1	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	9/2/2014	317.18	22.63	ND	ND	294.55	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	3/10/2015	317.18	23.25	ND	ND	293.93	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Kend	lall Stati	stic			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	<b>Data</b>					Analyt	ical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-26D(67)	8/26/2014	295.13	2.63	ND	ND	292.50	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	Open from 57-104'
	9/2/2014	295.13	2.68	ND	ND	292.45	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	12/9/2014	295.13	2.46	ND	ND	292.67	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/10/2015	295.13	1.98	ND	ND	293.15	NS	NS	NS	NS	NS	NS	NS	NS	NS	
							N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	<b>Data</b>					Analy	ical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-26D(78)	8/26/2014	295.13	2.63	ND	ND	292.50	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	9/2/2014	295.13	2.68	ND	ND	292.45	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	12/9/2014	295.13	2.46	ND	ND	292.67	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	3/10/2015	295.13	1.98	ND	ND	293.15	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	12/9/2014 295.13 2.46 ND ND 292.6						0	0	0	0	0	0	0	0	0	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	)ata					Analyt	ical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
MW-26D(89)	8/26/2014	295.13	2.63	ND	ND	292.50	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	9/2/2014	295.13	2.68	ND	ND	292.45	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(20)	ND(1)	ND(1)	ND(1)	
	12/9/2014	295.13	2.46	ND	ND	292.67	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/10/2015	295.13	1.98	ND	ND	293.15	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		Mann-Keno	lall Stati	stic			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	<b>Data</b>					Analyt	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
PW-1(65)	8/17/2009	334.54	NM	NM	NM	NM	0.76	ND(0.50)	ND(0.50)	0.46 J	1320	80.9	148	ND(0.50)	36.8	Abandoned to 75' (Nov 2011)
	10/16/2009	334.54	NM	NM	NM	NM	8	ND	ND	8.4	2520	NA	NA	NA	NA	Open from 55-75'
	6/22/2010	334.54	34.47	ND	ND	300.07	8	ND(0.7)	ND(0.8)	7	1600	NA	NA	NA	NA	
	9/30/2010	334.54	36.84	ND	ND	297.70	9	ND(0.7)	ND(0.8)	5	1600	NA	NA	NA	NA	
	12/16/2010	334.54	36.51	ND	ND	298.03	6	ND(1)	ND(2)	5	1700	NA	NA	NA	NA	
	5/24/2011	334.54	35.87	ND	ND	298.67	8 J	ND(4)	ND(4)	4 J	2100	NA	NA	NA	NA	
	9/2/2011	334.54	38.61	ND	ND	295.93	6	ND(0.7)	ND(0.8)	3 J	1800	NA	NA	NA	NA	Abandoned to 75' (Nov 2011)
	12/22/2011	334.54	36.37	ND	ND	298.17	4 J	ND(4)	ND(4)	ND(4)	1300	NA	NA	NA	NA	
	6/1/2012	334.54	36.82	ND	ND	297.72	3 J	ND(1)	ND(2)	ND(2)	860	NA	NA	NA	NA	
	2/25/2013	334.54	38.28	ND	ND	296.26	ND(5)	ND(5)	ND(5)	ND(5)	800	110	140	ND(5)	51	
	6/6/2013	334.54	37.41	ND	ND	297.13	3 J	ND(0.7)	ND(0.8)	ND(0.8)	1200	NA	NA	NA	NA	
	12/19/2013	334.54	38.60	ND	ND	295.94	ND(25)	ND(25)	ND(25)	ND(25)	4700	630	280	ND(25)	140	
	3/25/2014	334.54	36.19	ND	ND	298.35	ND(10)	ND(10)	ND(10)	ND(10)	6900	1000	290	ND(10)	180	
	6/19/2014	334.54	34.23	ND	ND	300.31	ND(5)	ND(5)	ND(5)	ND(5)	3300	420	170	ND(5)	76	
	9/10/2014	334.54	36.96	ND	ND	297.58	ND(10)	ND(10)	ND(10)	ND(10)	4600	370	210	ND(10)	120	
	12/10/2014	334.54	42.23	ND	ND	292.31	1	ND(1)	ND(1)	ND(1)	890	110	130	ND(1)	40	
	3/12/2015	334.54	43.30	ND	ND	291.24	ND(1)	ND(1)	ND(1)	ND(1)	460	70	100	ND(1)	21	
		Mann-Kend	lall Statis	stic			-82	0	0	-74	-11	-10	-9	0	-9	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	)ata					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
PW-1(85)	6/22/2010	334.54	34.47	ND	ND	300.07	8	ND(0.7)	ND(0.8)	5	2000	NA	NA	NA	NA	
	9/30/2010	334.54	36.85	ND	ND	297.69	9	ND(0.7)	ND(0.8)	6	1700	NA	NA	NA	NA	
	12/16/2010	334.54	36.51	ND	ND	298.03	8	ND(0.7)	ND(0.8)	6	1900	NA	NA	NA	NA	
	5/24/2011	334.54	35.87	ND	ND	298.67	6 J	ND(1)	ND(2)	3 J	2100	NA	NA	NA	NA	
	9/2/2011	334.54	38.61	ND	ND	295.93	5 J	ND(0.7)	ND(0.8)	2 J	1600	NA	NA	NA	NA	Abandoned to 75' (Nov 2011)
		stic			-7	0	0	-5	-2	N/A	N/A	N/A	N/A			

## **Groundwater Monitoring & Analytical Data – Deep Wells**

Inactive Fairfax Facility #26140 9901 Georgetown Pike Great Falls, Virginia August 17, 2009 through March 27, 2015

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
PW-1(105)	10/16/2009	334.54	NM	NM	NM	NM	5.8	ND	ND	4.1	1180	NA	NA	NA	NA	
	6/22/2010	334.54	34.47	ND	ND	300.07	5	ND(1)	ND(2)	3	2300	NA	NA	NA	NA	
	9/30/2010	334.54	36.85	ND	ND	297.69	9	ND(0.7)	ND(0.8)	5	1800	NA	NA	NA	NA	
	12/16/2010	334.54	36.51	ND	ND	298.03	8	ND(1)	ND(2)	5	1700	NA	NA	NA	NA	
	5/24/2011	334.54	35.87	ND	ND	298.67	5 J	ND(1)	ND(2)	2 J	1900	NA	NA	NA	NA	
	9/2/2011	334.54	38.61	ND	ND	295.93	3 J	ND(0.7)	ND(0.8)	1 J	1400	NA	NA	NA	NA	Abandoned to 75' (Nov 2011)
	9/2/2011 334.54 38.61 ND ND 295.9 <b>Mann-Kendall Statistic</b>							0	0	-6	-1	N/A	N/A	N/A	N/A	

Ref.: rpt\_gaug\_w\_9\_aq\VA 26140 GW Table\1350\26140\_DEEP

## **Groundwater Monitoring & Analytical Data – Deep Wells**

				Gauging I	<b>Data</b>					Analy	tical Data					
Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro- carbon (feet)	Hydro- carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Comments
RW-1	3/24/2014	328.31	30.91	ND	ND	297.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	Screened from 21-91'
	6/19/2014	328.31	28.14	ND	ND	300.17	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	8/20/2014	328.31	30.26	ND	ND	298.05	ND(20)	ND(20)	ND(20)	ND(20)	19000	3800	420	ND(20)	220	
	12/11/2014	328.31	58.61	ND	ND	269.70	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/12/2015	328.31	44.47	ND	ND	283.84	ND(20)	ND(20)	ND(20)	ND(20)	7200	1800	200	ND(20)	100	
		Mann-Kend	lall Statis	stic			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

## **Groundwater Monitoring & Analytical Data – Deep Wells**

Inactive Fairfax Facility #26140 9901 Georgetown Pike Great Falls, Virginia August 17, 2009 through March 27, 2015

### **Notes:**

 $\mu$ g/L - micrograms per liter ( $\mu$ g/L)

CMT - Continuous Multichannel Tubing

DIPE - Isopropyl ether

ETBE - Ethyl tert-butyl ether

GW - Groundwater

J - Indicates an estimated value

MTBE - Methyl Tertiary Butyl Ether

NA - Not analyzed

ND - Not detected

ND(5.0) - Not detected at or above the laboratory reporting limit, laboratory reporting limit included.

NM - Not monitored

NS - Not sampled

NSVD - Not surveyed to vertical datum

TAME - Tert-Amyl methyl ether

TBA - Tert-Butyl alcohol

Table 5

## **Monitored Natural Attenuation Field Parameters Summary**

Inactive Fairfax Facility #26140 9901 Georgetown Pike Great Falls, Virginia

## March 24, 2014 through March 12, 2015

				nuation Field Paramete		
Well ID	Date	Dissolved Oxygen (mg/L)	ORP (mV)	pH (su)	Specific Conductance (mS/cm)	Comments
MW-1	3/25/2014	0.91	-123.2	11.56	0.425	
10100-1	6/20/2014	0.56	219.8	4.59	0.425	
MW-2	3/25/2014	2.98	-114.3	12.78	0.278	
10100-2	6/20/2014	5.38	210.7	4.67	0.414	
	9/10/2014	3.87	41.0	6.05	0.602	
MW-5	9/2/2014	0.68	107.2	6.12	0.431	
MW-6S	9/3/2014	2.37	121.3	6.68	0.627	
MW-6D (65)	6/18/2014	0.79	-64.6	6.34	0.686	
MW-6D (85)	6/18/2014	0.44	-118.9	6.79	0.727	
MW-6D (105)	6/18/2014	0.39	-147.9	6.63	0.839	
	3/28/2014	0.67			0.839	
MW-7	6/20/2014	4.19	-159.8 204.1	11.84 4.95	0.216	
SVE-2			-144.5			
3VE-2	3/25/2014 9/10/2014	1.92 1.13	28.7	12.04 6.26	0.664 1.007	
MANA/ O		3.60	-36.4	8.26	0.538	
MW-9	3/24/2014					
MW-10	6/18/2014 9/3/2014	3.66 6.03	153.9 -126.1	5.97 5.08	0.743 0.310	
MW-11	3/24/2014		-126.1			
IAIAA-TT	6/20/2014	2.09 2.71	-117.b -86.4	10.09 10.62	0.806 0.729	
<del>                                     </del>	9/10/2014	0.66	-85.4 85.2	6.80	0.729	
MW-12D (110)	6/18/2014	2.63	-97.2	6.57	0.713	
MW-12D (110)	6/18/2014	2.05	-101.4	5.82	0.713	
MW-13	3/24/2014 6/19/2014	0.75 1.52	-118.5 -131.8	10.40 10.06	0.245 0.296	
	9/10/2014	1.61	-131.8	5.19	0.296	
MW-14	3/24/2014	3.59	-106.4	9.75	0.809	
10100-14	6/19/2014	3.81	-114.8	8.47	0.832	
	9/10/2014	7.08	-84.2	6.12	0.340	
MW-15	3/25/2014	2.08	-119.8	12.24	1.137	
	6/20/2014	2.54	-173.4	12.14	1.071	
	9/10/2014	2.15	42.5	6.17	0.629	
	12/10/2014	2.93	95.7	6.70	0.702	
	3/11/2015	5.68	105.2	5.52	0.696	
MW-16D(95)	3/25/2014	0.26	-112.3	11.56	0.858	
` /	6/19/2014	0.37	-71.7	6.38	0.894	
MW-18D	6/18/2014	2.65	-138.2	6.87	0.638	
	9/3/2014	0.73	-196.0	8.87	0.286	
MW-19D	3/28/2014	3.17	-78.5	6.26	0.805	
	6/20/2014	0.69	-178.2	8.00	0.904	
	9/4/2014	6.23	-184.0	5.63	0.540	
MW-20D(73-83)	8/26/2014	2.68	54.8	6.23	0.302	
	9/2/2014	0.85	50.2	6.60	0.503	
	3/12/2015	2.71	-57.4	6.42	0.506	
1W-20D(90-100)	8/26/2014	4.55	45.1	6.12	0.370	
	9/2/2014	2.36	63.1	6.17	0.489	
	3/12/2015	2.58	-16.2	6.74	0.304	
W-20D(132-142)	8/26/2014	3.64	79.2	6.39	0.257	
	9/2/2014	3.59	88.2	7.13	0.551	
	3/12/2015	2.46	-55.6	6.32	0.423	
MW-21S	4/11/2014	3.51	173.9	5.72	0.879	
	6/18/2014	1.76	158.5	6.09	0.855	
<u></u>	12/10/2014	1.25	150.8	5.43	0.86	
	3/11/2015	0.90	89.6	5.66	0.652	
MW-21I	4/11/2014	1.89	196.6	5.58	0.737	
<u></u>	6/18/2014	1.18	213.2	5.89	0.702	
	12/10/2014	0.50	92.3	5.42	0.861	
	3/11/2015	0.37	97.0	5.56	0.605	

Table 5

## **Monitored Natural Attenuation Field Parameters Summary**

Inactive Fairfax Facility #26140 9901 Georgetown Pike Great Falls, Virginia

## March 24, 2014 through March 12, 2015

			Ionitored Natural Atte	nuation Field Paramet	ters	
Well ID	Date	Dissolved Oxygen (mg/L)	ORP (mV)	pH (su)	Specific Conductance (mS/cm)	Comments
MW-22	4/11/2014	5.86	184.8	5.79	0.539	
	6/18/2014	5.50	185.8	5.89	0.574	
	9/2/2014	1.69	-215.2	4.95	0.355	
MW-23D	6/19/2014	1.48	-95.1	8.91	0.694	
	8/20/2014	2.27	272.3	3.19	718	
	9/3/2014	0.72	-195.0	5.77	0.799	
	10/21/2014	0.50	77.2	5.80	0.809	
	12/10/2014	0.80	121.2	6.36	0.827	
	3/11/2015	1.27	70.9	6.04	0.392	
MW-24	4/11/2014	6.28	212.6	5.71	0.639	
	6/18/2014	6.61	215.2	5.88	0.589	
	9/3/2014	5.70	-127.6	4.83	0.553	
	3/12/2018	0.98	108.9	6.58	0.468	
ЛW-25D (76)	8/20/2014	NA	1.9	6.10	547	
	9/2/2014	0.48	-189.6	6.16	0.663	
/W-25D (90)	8/20/2014	NA	-19.1	6.17	543	
	9/2/2014	0.49	-244.4	6.17	0.649	
F	12/9/2014	0.73	-205.0	6.23	0.661	
	3/10/2015	0.67	-63.2	6.64	0.637	
/W-25D (98)	8/20/2014	NA	-32.6	6.16	541	
` '	9/2/2014	0.85	-231.9	6.20	0.658	
MW-26D (67)	8/26/2014	1.71	81.2	7.08	0.305	
` '	9/2/2014	1.03	-223.5	5.95	0.467	
/W-26D (78)	8/26/2014	2.36	79.8	7.09	0.402	
	9/2/2014	1.11	-263.3	6.16	0.540	
	12/9/2014	0.68	-184.4	6.45	0.6769	
	3/10/2015	1.41	-85.3	7.36	0.294	
MW-26D (89)	8/26/2014	1.41	81.2	6.95	0.346	
(55)	9/2/2014	1.20	-250.3	6.07	0.554	
MW-27S	8/26/2014	1.77	34.1	6.80	0.453	
-	9/2/2014	0.38	-251.3	5.78	0.420	
	12/9/2014	1.04	14.2	5.41	0.339	
	3/11/2015	1.27	44.7	5.95	0.250	
MW-27I	8/26/2014	1.95	75.7	6.65	0.509	
	9/2/2014	1.12	-234.5	5.70	0.785	
	12/9/2014	1.60	199.3	5.41	0.786	
	3/11/2015	2.00	74.2	5.72	0.560	
PW-1(65)	3/25/2014	0.37	-137.8	12.61	0.772	
(***)	6/19/2014	0.49	-168.2	11.13	0.827	
	9/10/2014	0.97	69.5	6.22	0.871	
	12/10/2014	1.16	105.3	6.94	0.710	
	3/12/2015	0.97	18.9	6.27	0.413	
W-1	3/25/2014	0.72	197.3	5.35	1.011	
	6/19/2014	0.72	219.6	5.12	0.932	
	9/3/2014	0.84	-64.1	5.18	1.261	
	12/10/2014	0.23	157.8	5.16	1.187	
	3/12/2015	0.75	126.9	4.87	0.422	
W-2	3/25/2014	2.98	144.8	5.75	0.473	
<u> </u>	6/19/2014	2.85	197.8	6.13	0.420	
<u> </u>	9/3/2014	1.34	-85.7	5.46	1.042	
<u> </u>	12/10/2014	0.95	68.0	4.66	0.579	
<u> </u>	3/11/2015	1.14	130.9	4.78	0.390	
W-3	9/3/2014	5.32	-107.9	4.42	0.639	
W-6	3/25/2014	5.87	179.6	5.21	0.124	
× +	6/18/2014	5.68	122.6	5.65	0.169	
F	9/3/2014	4.70	-123.8	4.90	0.146	
F	12/9/2014	4.87	68.6	5.87	0.160	
-	3/11/2015	6.31	76.8	6.45	1.489	

## Table 5

## **Monitored Natural Attenuation Field Parameters Summary**

Inactive Fairfax Facility #26140 9901 Georgetown Pike Great Falls, Virginia

## March 24, 2014 through March 12, 2015

		N	Ionitored Natural Atte	nuation Field Parameters	i	
Well ID	Date	Dissolved Oxygen (mg/L)	ORP (mV)	pH (su)	Specific Conductance (mS/cm)	Comments
W-7	3/24/2014	0.99	77.3	6.03	0.392	
	6/18/2014	1.43	60.2	6.08	0.384	
	9/3/2014	0.59	-167.1	5.69	0.431	
	12/9/2014	0.93	32.9	6.07	0.383	
	3/10/2015	0.97	-19.3	6.87	0.344	
RW-1	8/20/2014	5.71	278.1	5.72	363	
GFSCMW-2	3/24/2014	1.32	67.5	6.15	0.425	
GFSCMW-3	3/24/2014	1.45	80.1	6.06	0.409	
GFSTMW-1	6/20/2014	5.19	181.2	5.26	0.599	

### Notes:

mg/L - miligrams per liter

mV - milivolt

su - standard units

mS/cm - milisiemens per centimeter

NA - not available

SVE System Monitoring and Performance Inactive Fairfax Facility #26140 9901 Georgetown Pike Great Falls, Virginia

July 10, 2014 through March 17, 2015

Date	SVE System Hour Meter (hr)	Total Hours	Total Days	Total Days Since Previous	Operating Wells	Blower Vacuum (inches Hg)	Effluent Air Velocity (fpm)	Air Flow (cfm)	Blower Effluent PID (ppm)
6/17/2014	9,037	0	0.0	0.0	SVE-1 through SVE-5, MW-14	6.5	6,736	229.6	1.3
6/24/2014	9,201	164	6.8	6.8	SVE-1 through SVE-5, MW-14	7.0	510	17.4	1.1
7/10/2014	9,465	428	17.8	11.0	SVE-1 through SVE-5, MW-14	14.3	8,846	301.5	0.5
7/24/2014	9,474	437	18.2	0.4	SVE-1, SVE-3, SVE-5, MW-14	18.0	915	31.2	0.7
7/31/2014	9,514	478	19.9	1.7	SVE-1, SVE-3, SVE-5, MW-14	19.0	873	29.8	0.0
8/11/2014	9,545	509	21.2	1.3	SVE-1, SVE-3, SVE-5, MW-14	5.0			
8/13/2014	9,572	536	22.3	1.1	SVE-1, SVE-3, SVE-5, MW-14	10.0			
8/14/2014	9,604	568	23.6	1.3	SVE-1 through SVE-5, MW-14	10.0	624	21.3	0.6
8/27/2014	9,909	872	36.3	12.7	SVE-1 through SVE-5, MW-14	9.0	1,312	44.7	2.0
9/12/2014	10,224	1,188	49.5	13.1	SVE-1 through SVE-5, MW-14	8.0	8,797	299.9	0.0
9/16/2014	10,316	1,279	53.3	3.8	SVE-1 through SVE-5, MW-14	7.5			0.1
9/22/2014	10,460	1,424	59.3	9.8	SVE-1 through SVE-5, MW-14	9.5	6,100	207.9	0.1
9/30/2014	10,652	1,616	67.3	8.0	SVE-1 through SVE-5, MW-14	10.0	6,600	225.0	0.0
10/6/2014	10,795	1,759	73.3	6.0	SVE-1 through SVE-5, MW-14	7.0	6,950	236.9	0.0
10/13/2014	10,963	1,926	80.3	7.0	SVE-1 through SVE-5, MW-14	7.0	6,940	236.6	0.0
10/20/2014	11,132	2,095	87.3	7.0	SVE-1 through SVE-5, MW-14	10.0	6,800	231.8	0.0
10/27/2014	11,298	2,262	94.2	6.9	SVE-1 through SVE-5, MW-14	10.0	5,760	196.3	0.0
11/3/2014	11,467	2,431	101.3	7.0	SVE-1 through SVE-5, MW-14	10.0	5,120	174.5	0.0
11/18/2014	11,830	2,793	116.4	15.1	SVE-1 through SVE-5, MW-14	14.0	2,587	88.2	0.0
12/29/2014	12,813	3,777	157.4	41.0	SVE-1 through SVE-5, MW-14	13.0	5,236	178.5	0.0
2/11/2015	13,871	4,835	201.4	44.1	SVE-1 through SVE-5, MW-14	11.5	2,942	100.3	0.0
3/17/2015	NR	NR	235.4	34.0	SVE-1 through SVE-5, MW-14	NR	NR	NR	NR

	Mass Recover	red (MTBE)					Hydrocarbon I	Mass Recovere	d (TPH >C4-C10)			
Date	Beg. Conc. (mg/m³)	End Conc. (mg/m³)	Avg. Conc. (mg/m³)	Recovery Rate (lbs/hr)	Mass Recovered in Period (lbs)	Cumulative Recovery (lbs)	Beg. Conc. (mg/m³)	End Conc. (mg/m³)	Avg. Conc. (mg/m³)	Recovery Rate (lbs/hr)	Mass Recovered in Period (lbs)	Cumulative Recovery (lbs)
6/17/2014	-	2.0	2.0	0.0	0.0	0.0	-	17.5	17.5	0.0	0.0	0.0
6/24/2014	2.0	2.0	2.0	0.0	0.0	0.0	17.5	17.5	17.5	0.0	0.2	0.2
7/10/2014	2.0	2.0	2.0	0.0	1.0	1.0	17.5	17.5	17.5	0.0	8.5	8.6
7/24/2014												
7/31/2014												
8/11/2014												
8/13/2014												
8/14/2014												
8/27/2014	2.0	2.0	2.0	0.0	0.3	1.3	17.5	17.5	17.5	0.0	2.6	11.2
9/12/2014												
9/16/2014	2.0	2.0	2.0	0.0	0.4	1.7	17.5	17.5	17.5	0.0	3.7	15.0
9/22/2014												
9/30/2014						-						-
10/6/2014	2.0	2.0	2.0	0.0	3.1	4.8	17.5	17.5	17.5	0.0	27.3	42.3
10/13/2014												
10/20/2014												
10/27/2014	2.0	2.0	2.0	0.0	3.3	8.2	17.5	17.5	17.5	0.0	29.1	71.4
11/3/2014												
11/18/2014	2.0	2.0	2.0	0.0	1.8	13.2	17.5	17.5	17.5	0.0	16.1	115.6
12/29/2014	2.0	2.0	2.0	0.0	5.0	18.3	17.5	17.5	17.5	0.0	44.2	159.7
2/11/2015	2.0	0.1	1.1	0.0	1.9	20.2						-
3/17/2015	0.1	0.07	0.1	0.0	0.2	20.3	17.5	17.5	17.5	0.0	37.1	196.9

Table 6 Page 2 of 3

#### **SVE System Monitoring and Performance**

Inactive Fairfax Facility #26140 9901 Georgetown Pike Great Falls, Virginia

### July 10, 2014 through March 17, 2015

Cummulative (June 17, 2014 through March 17, 2015) First Quarter (December 29, 2014 through March 17, 2015) Vapor Recovery Summary: Vapor Recovery Summary: Total Days Operating 235.4 Total Days Operating 78 Total Days 273 Total Days in Period 78 86% Percent Run Time 100% Percent Run Time Average Flow Rate (cfm) 158.4 Average Flow Rate this Period (cfm) 139.4 Estimated Cumulative Mass Recovered (lbs) 196.9 Estimated Mass Recovered this Period (lbs) 37.1 Estimated Cumulative Mass MTBE Recovered (lbs) 20.3 Estimated Mass MTBE Recovered this Period (lbs) 2.1

Flow (cfm) x (1 lb/453,592.37 mg) x (1 m $^3$ /35.314 ft $^3$ ) x TPH mg/m $^3$ x 60 min/hr = Recovery Rate (lbs/hr) Recovery Rate (lbs/hr) x (Operating Hours) = Mass Recovered for period (lbs)

#### AIRBAG ANALYTICAL SUMMARY:

#### AIRBAG ANALYTICAL SUMMARY:

	Effluent Concentration (mg/m³)										
Compound	6/17/2014	6/24/2014	7/10/2014	8/27/2014	9/16/2014	10/7/2014	10/27/2014	11/18/2014	12/17/2014	2/11/2015	3/17/2015
Benzene	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 0.0032	0.0040
Toluene	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	<0.0038	0.018
Ethylbenzene	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 0.0043	0.0076
Total Xylenes	< 9	< 9	< 9	< 9	< 9	< 9	< 9	< 9	< 9	0.039	0.016
MTBE	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	0.10	0.065
TPH - C <sub>1</sub> -C <sub>4 (as propane)</sub>	< 18	< 18	< 18	< 18	< 18	< 18	< 18	< 18	< 18	NA	< 18
TPH - >C <sub>4</sub> -C <sub>10 (as hexane)</sub>	< 35	< 35	< 35	< 35	< 35	< 35	< 35	< 35	< 35	NA	< 35

#### **SVE System Monitoring and Performance**

Inactive Fairfax Facility #26140 9901 Georgetown Pike Great Falls, Virginia

July 10, 2014 through March 17, 2015

#### Vacuum Influence Summary:

		July 2	4, 2014	August	14, 2014	September	22, 2014	October	20, 2014	Novembe	r 18, 2014	December 29, 2014	
Well	Distance from Closest SVE Well (feet)	Vacuum ("H20)	Normalized Vacuum Influence	Vacuum ("H20)	Normalized Vacuum Influence	Vacuum ("H20)	Normalized Vacuum Influence	Vacuum ("H20)	Normalized Vacuum Influence	Vacuum ("H20)	Normalized Vacuum Influence	Vacuum ("H20)	Normalized Vacuum Influence
SVE-1		271		109		89		150		122		136	
SVE-2		OFF		122		5		40		82		163	
SVE-3		258		122		80		150		190		176	
SVE-4		OFF		109		20		20		27		108	
SVE-5		258		109		85		135		190		122	
MW-14		271		116		90		125		27		95	
MW-1	11.8	81.60	30.9%	38	33.2%	13.0	21.1%	50.0	48.4%	65.5	61.5%	32.0	24.0%
MW-2	14.5	4.40	1.7%	3.0	2.6%	0.7	1.1%	4.5	4.4%	4.8	4.5%	5.0	3.8%
MW-7	29.4	2.20	0.8%	0.2	0.2%	0.5	0.8%	1.0	1.0%	2.2	2.1%	1.0	0.8%
MW-9	59.6	NM	NM	0.1	0.1%	0.1	0.2%	0.5	0.5%	NM	NM	2.0	1.5%
MW-11	5.2	19.50	7.4%	7.5	6.6%	12.0	19.5%	16.0	15.5%	15.5	14.6%	15.0	11.3%
MW-13	12.0	0.46	0.2%	0.5	0.4%	1.5	2.4%	2.0	1.9%	0.6	0.6%	2.0	1.5%
MW-15	3.1	0.19	0.1%	8.0	7.0%	0.5	0.8%	6.5	6.3%	14.0	13.1%	10.0	7.5%

#### Notes:

Operating days are from the last monitoring event of the previous month to last monitoring event of the current month.

Flow (cfm) x (1 lb/453,592.37 mg) x (1 m³/35.314 ft³) x TPH mg/m³ x 60 min/hr = Recovery Rate (lbs/hr)

Recovery Rate (lbs/hr) x (Operating Hours) = Mass Recovered for period (lbs)

TPH = Total Petroluem Hydrocarbons

MTBE = methyl tert-butyl ether

BTEX = benzene, toluene, ethylbenzene, total xylenes

fpm = feet per minute

cfm = cubic feet per minute

mg / m3 = milligrams per cubic meter

lbs / hr = pounds per hour

lbs = pounds

ppm = parts per million

PID = photoionization detector

NA = not analyzed

NM = not measured

NC = not calculated

NR = not recorded Hg = mercury

hr = hour

Pipe Diameter for velocity measurements = 2.5 inches.

If TPH is below the laboratory recordable limit, then half of the sum of the detection limit is used in calculating hydrocarbon mass recovery.

"H2O = inches of water column

Vacuum for SVE-1 through SVE-5 and MW-14 and monitoring wells measured at the wellhead.

 $Normalized\ Vacuum\ Influence = Wellhead\ Vacuum/The\ average\ vacuum\ observed\ at\ the\ operating\ SVE\ wellheads\ ^*\ 100\%$ 

-- = Not Applicable

#### Table 7

### **Groundwater Recovery System Monitoring and Performance**

Inactive Fairfax Facility #26140 9901 Georgetown Pike, Great Falls, Virginia

#### August 28, 2014 through March 27, 2015

#### SYSTEM OPERATING DATA:

Date	Date and Time	RW-1 Influent Totalizer Reading (gallons)	RW-1 Runtime (hours)	MW-16D Influent Totalizer Reading (gallons)	MW-16D Runtime (hours)	Effluent Totalizer Reading (gallons)	Gallons Treated during Period	Operating Days during Period	Average Flow (gpm)	Average Flow (gpd)	MTBE Beg. Conc. (μg/L)	MTBE End Conc. (μg/L)	Avg. Influent Total MTBE (µg/L)	MTBE Recovery Rate (lbs/hr)	MTBE Mass Recovered (lbs) during Period	MTBE Cumulative Mass Recovered (lbs)
8/28/2014	8/28/14 7:40	84	0	97	0	582		0.0				40,000				
8/28/2014 <sup>1</sup>	8/28/14 10:40	1,338	3	97	0	NR	NR	0.1	8.35	1,338	40,000	40,000	40,000	0.17	0.45	0.45
8/29/2014 <sup>2</sup>	8/29/14 6:30	1,338	3	10,869	20	12,884	12,302	0.8	9.06	10,869	4,200	4,200	4,200	0.02	0.38	0.83
8/29/2014	8/29/14 9:20	1,361	6	10,869	20	13,599	715	0.1	4.21	6,064	40,000	60,000	50,000	0.11	0.30	1.13
9/2/2014	9/2/14 18:05	19,950	97	10,869	20	32,320	18,721	3.8	3.41	4,910	60,000	60,000	60,000	0.10	9.37	10.50
9/3/2014	9/3/14 7:00	24,901	111	10,869	20	37,020	4,700	0.6	5.60	8,057	60,000	29,000	44,500	0.12	1.75	12.24
9/4/2014	9/4/14 15:15	41,155	143	10,869	20	53,274	16,254	1	8.40	12,096	29,000	33,000	31,000	0.13	4.20	16.45
9/12/2014	9/12/14 14:15	106,698	286	10,869	20	118,402	81,382	6	9.49	13,659	33,000	33,000	33,000	0.16	22.41	38.86
9/16/2014	9/16/14 7:15	154,200	362	10,869	20	165,065	46,663	3.7	8.74	12,583	33,000	21,000	27,000	0.12	10.51	49.37
9/22/2014	9/22/14 7:30	228,617	506	10,869	20	238,365	73,300	6.0	8.48	12,217	21,000	21,000	21,000	0.09	12.84	62.22
9/30/2014	9/30/14 8:30	317,802	684	10,869	20	327,777	89,412	7.4	8.37	12,056	21,000	21,000	21,000	0.09	15.67	77.88
10/6/2014	10/6/14 8:00	388,909	827	10,869	20	399,420	71,643	6.0	8.35	12,024	21,000	16,000	18,500	0.08	11.06	88.94
10/13/2014	10/13/14 7:20	468,702	988	10,869	20	479,111	79,691	6.7	8.25	11,879	16,000	16,000	16,000	0.07	10.64	99.58
10/20/2014	10/20/14 8:20	552,099	1,157	10,869	20	561,935	82,824 82,208	7.0 6.7	8.17	11,762	16,000	17,000	16,500	0.07	11.40	110.99
10/27/2014 11/6/2014	10/27/14 8:00 11/6/14 10:45	634,476 741,202	1,318 1,533	10,869 10,869	20 20	644,143 750,608	106,465	9.0	8.51 8.25	12,255 11,884	17,000 17,000	17,000 12,000	17,000 14,500	0.07 0.06	11.66 12.88	122.65 135.53
							97.817	8.4	8.11	11,680						
11/18/2014	11/18/14 14:33	839,069	1,734	10,869	20	848,425	- ,-		8.11	,	12,000	12,000	12,000	0.05	9.79	145.32
11/25/2014	11/25/14 10:20	918,427	1,896	10,869	20	927,265	78,840	6.8		11,680	12,000	12,000	12,000	0.05	7.89	153.22
11/26/2014	11/26/14 10:00	922,579	1,903	10,869	20	930,784	3,519	0.3	8.38	12,065	12,000	12,000	12,000	0.05	0.35	153.57
12/3/2014	12/3/14 11:54	991,666	2,045	10,869	20	995,891	65,107	5.9	7.64	11,004	12,000	12,000	12,000	0.05	6.52	160.09
12/17/2014	12/17/14 14:45	1,125,750	2,383	10,869	20	1,160,620	164,729	14.1	8.12	11,697	12,000	12,000	12,000	0.05	16.49	176.58
12/29/2014	12/29/14 10:15	1,300,720	2,668	10,869	20	1,299,310	138,690	11.9	8.11	11,679	12,000	8,700	10,350	0.04	11.98	188.56
1/5/2015	1/5/15 13:30	1,385,250	2,840	10,869	20	1,384,070	84,760	7.2	8.21	11,879	8,700	8,700	8,700	0.04	6.15	194.72
1/14/2015	1/14/15 10:00	1,488,490	3,050	10,869	20	1,488,830	104,760	8.8	8.31	11,832	8,700	8,700	8,700	0.04	7.61	202.32
1/26/2015	1/26/15 14:30	1,490,480	3,054	10,869	20	1,490,340	1,510	0.2	6.29	124	12,000	12,000	12,000	0.04	0.15	202.47
1/30/2015	1/30/15 9:45	1,562,290	3,145	10,869	20	1,535,710	45,370	3.80	8.29	11,933	12,000	12,000	12,000	0.05	4.54	207.01
2/3/2015	2/3/15 10:00	1,590,570	3,219	24,731	94	1,571,390	35,680	4.01	6.18	8,897	3,900	5,300	4,600	0.01	1.37	208.38
2/11/2015	2/11/15 9:38	1,647,930	3,408	59,978	282	1,661,500	90,110	7.98	7.84	11,285	5,300	5,300	5,300	0.02	3.99	212.37
2/20/2015	2/20/15 11:00	1,712,450	3,492	75,606	367	1,701,030	39,530	9.06	3.03	4,365	5,300	5,300	5,300	0.01	1.75	214.12
2/27/2015	2/27/15 13:00	1,757,040	3,644	105,201	520	1,760,620	59,590	7.08	5.84	8,413	5,300	5,300	5,300	0.02	2.64	216.75
3/4/2015	3/4/15 10:35	1,790,190	3,761	126,911	637	1,813,180	52,560	4.90	7.45	10,728	5,300	4,900	5,100	0.02	2.24	218.99
3/9/2015	3/9/15 14:50	1,824,630	3,884	149,977	760	1,867,980	54,800	5.18	7.35	10,585	4,900	4,900	4,900	0.02	2.24	221.23
3/17/2015	3/17/15 12:35	1,877,980	4,074	188,633	950	1,951,870	83,890	7.91	7.37	10,611	4,900	4,900	4,900	0.02	3.43	224.66
3/27/2015	3/27/15 13:30	1,945,690	4,314	234,952	1,191	2,059,280	107,410	10.04	7.43	10,700	4,900	4,900	4,900	0.02	4.39	229.05

### Cumulative Hydrocarbon Recovery and Discharge

1,951,288
170
201
84%
6.73
9,698
229.05

### HYDROCARBON RECOVERY & DISCHARGE CALCULATION:

 $\label{lem:mass} Mass \ discharged/recovery \ rate \ (lbs/hr) = (conc.)(3.785 \ L/gal)(1 \ lb/453600000 \ \mu g)(flow \ rate-gpm)(60 \ min/hr) \\ Mass \ discharged/recovery \ (lbs) = (conc.)(3.785 \ L/gal)(1 \ lb/453600000 \ \mu g)(flow \ rate-gpd)(days \ operating) \\ Note that \ (lbs/mass) = (lbs/mass) + (lbs/mass) +$ 

#### First Quarter (December 29, 2014 through March 27, 2015)

First Quarter (December 25, 2014 tillough March 27, 2015)	
Groundwater Treated/Discharged this Period (gal)	759,970
Total Operating Days	69
Total Days in Period	88
Run Time (%)	78%
Average Flow (gpm)	5.99
Average Flow (gpd)	8,623
Total MTBE Mass Recovered this Period (lbs)	40.49

#### Table 7

### **Groundwater Recovery System Monitoring and Performance**

Inactive Fairfax Facility #26140 9901 Georgetown Pike, Great Falls, Virginia

August 28, 2014 through March 27, 2015

#### Notes:

gal = gallons gpm = gallons per minute gpd = gallons per day μg/l = micrograms per liter lbs / hr = pounds per hour lbs = pounds

MTBE = methyl tertiary butyl ether

If compounds were detected below the laboratory recordable limits, then half of the sum of the detection limits for each compound are used in calculating hydrocarbon mass recovery. System readings collected upon departure; gallons treated and average flow calculations determined from effluent totalizer values.

- 1 Data representative of RW-1 pumping from 1030 on 8/28/14 0630 on 8/29/14. MW-16D pump turned off and MW-16D pump turned on at 1040 on 8/28/14.

  2 Data representative of MW-16D pumping from 1030 on 8/28/14 0630 on 8/29/14. MW-16D pump turned off and RW-1 pump turned on at 0630 on 8/29/14.



# **APPENDIX A**

Lancaster Laboratories Analysis Reports – Groundwater

# Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

## ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 Kleinfelder 550 West C Street, Suite 1200 San Diego CA 92101

March 24, 2015

**Project: Fairfax 26140** 

Submittal Date: 03/12/2015 Group Number: 1544869 PO Number: 51141-304775 State of Sample Origin: VA

Client Sample Description	Lancaster Labs (LL) #
MW-17D(75.00) Grab Water	7802439
MW-17D(81.00) Grab Water	7802440
MW-17D(87.75) Grab Water	7802441
MW-17D(92.00) Grab Water	7802442
MW-16D(95) Grab Water	7802443
MW-17D(117.00) Grab Water	7802444
MW-17D(129.75) Grab Water	7802445
MW-17D(147.00) Grab Water	7802446
MW-26D(78) Grab Water	7802447
MW-25D(90) Grab Water	7802448
W-7 Grab Water	7802449
W-6 Grab Water	7802450
MW-27S Grab Water	7802451
MW-27I Grab Water	7802452
MW-21S Grab Water	7802453
MW-21I Grab Water	7802454
MW-23D Grab Water	7802455
MW-15 Grab Water	7802456
W-2 Grab Water	7802457
MW-24 Grab Water	7802458
PW-1(65) Grab Water	7802459
W-1 Grab Water	7802460
RW-1 Grab Water	7802461
MW-20D(73-83) Grab Water	7802462
MW-20D(90-100) Grab Water	7802463
MW-20D(132-142) Grab Water	7802464

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

# Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <a href="http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/">http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/</a>.

ELECTRONIC	Kleinfelder	Attn: Mark Steele
COPY TO		
ELECTRONIC	Kleinfelder	Attn: Venelda Williams
COPY TO		
ELECTRONIC	Kleinfelder	Attn: Paxton Wertz
COPY TO		
ELECTRONIC	Kleinfelder	Attn: Nathan Stevens
COPY TO		
ELECTRONIC	Kleinfelder	Attn: Jennifer Kozak
COPY TO		

Respectfully Submitted,

Amek Carter Specialist

(717) 556-7252



# **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-17D(75.00) Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802439 LL Group # 1544869

Account # 12152

Project Name: Fairfax 26140

Collected: 03/09/2015 10:00 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

17D75

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10335	t-Amyl methyl ether	994-05-8	210	20	20
10335	Benzene	71-43-2	< 20	20	20
10335	t-Butyl alcohol	75-65-0	4,900	400	20
10335	Ethyl t-butyl ether	637-92-3	< 20	20	20
10335	Ethylbenzene	100-41-4	< 20	20	20
10335	di-Isopropyl ether	108-20-3	300	20	20
10335	Methyl Tertiary Butyl	1634-04-4	23,000	200	200
	Ether				
10335	Toluene	108-88-3	< 20	20	20
10335	Xylene (Total)	1330-20-7	< 20	20	20

## General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150771AA	03/18/2015 16:3	Linda C Pape	20
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150771AA	03/18/2015 16:5	B Linda C Pape	200
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150771AA	03/18/2015 16:3	Linda C Pape	20
01163	GC/MS VOA Water Pren	SW-846 5030B	2	T150771AA	03/18/2015 16.5	R Linda C Pane	200



# Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-17D(81.00) Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802440

LL Group # 1544869 Account # 12152

Project Name: Fairfax 26140

Collected: 03/09/2015 11:00 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

## 17D81

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-8	346 8260B	ug/l	ug/l	
10335	t-Amyl methyl ether	994-05-8	< 1	1	1
10335	Benzene	71-43-2	< 1	1	1
10335	t-Butyl alcohol	75-65-0	< 20	20	1
10335	Ethyl t-butyl ether	637-92-3	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	di-Isopropyl ether	108-20-3	2	1	1
10335	Methyl Tertiary Butyl	1634-04-4	14	1	1
	Ether				
10335	Toluene	108-88-3	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

## General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150771AA	03/18/2015 15:23	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150771AA	03/18/2015 15:23	Linda C Pape	1



# **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-17D(87.75) Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802441

LL Group # 1544869 Account # 12152

Project Name: Fairfax 26140

Collected: 03/09/2015 12:30 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

## 17D87

CAT No.	Analysis Name		CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846	8260B	ug/l	ug/l	
10335	t-Amyl methyl ether		994-05-8	< 1	1	1
10335	Benzene		71-43-2	< 1	1	1
10335	t-Butyl alcohol		75-65-0	21	20	1
10335	Ethyl t-butyl ether		637-92-3	< 1	1	1
10335	Ethylbenzene		100-41-4	< 1	1	1
10335	di-Isopropyl ethe	r	108-20-3	3	1	1
10335	Methyl Tertiary B	utyl	1634-04-4	80	1	1
	Ether					
10335	Toluene		108-88-3	< 1	1	1
10335	Xylene (Total)		1330-20-7	< 1	1	1

## General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT	Analysis Name	Method	Trial#	Batch#	Analysis	Analyst	Dilution
No.					Date and Time		Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150771AA	03/18/2015 17:22	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150771AA	03/18/2015 17:22	Linda C Pape	1



# **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-17D(92.00) Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802442 LL Group # 1544869

Account # 12152

Project Name: Fairfax 26140

Collected: 03/09/2015 14:10 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

## 17D92

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846 82	260B	ug/l	ug/l	
10335	t-Amyl methyl ether	994-05-8	8	3	2.5
10335	Benzene	71-43-2	< 3	3	2.5
10335	t-Butyl alcohol	75-65-0	220	50	2.5
10335	Ethyl t-butyl ether	637-92-3	< 3	3	2.5
10335	Ethylbenzene	100-41-4	< 3	3	2.5
10335	di-Isopropyl ether	108-20-3	16	3	2.5
10335	Methyl Tertiary Butyl	1634-04-4	620	3	2.5
	Ether				
10335	Toluene	108-88-3	< 3	3	2.5
10335 Repo	Xylene (Total) rting limits were raised due to	1330-20-7 sample foaming.	< 3	3	2.5

## General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150781AA	03/19/2015 19:40	Linda C Pape	2.5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150781AA	03/19/2015 19:40	Linda C Pape	2.5



# Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-16D(95) Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802443 LL Group # 1544869

Account # 12152

Project Name: Fairfax 26140

Collected: 03/09/2015 13:10 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

## 16D95

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10335	t-Amyl methyl ether	994-05-8	17	2	2
10335	Benzene	71-43-2	< 2	2	2
10335	t-Butyl alcohol	75-65-0	290	40	2
10335	Ethyl t-butyl ether	637-92-3	< 2	2	2
10335	Ethylbenzene	100-41-4	< 2	2	2
10335	di-Isopropyl ether	108-20-3	67	2	2
10335	Methyl Tertiary Butyl	1634-04-4	1,300	20	20
	Ether				
10335	Toluene	108-88-3	< 2	2	2
10335	Xylene (Total)	1330-20-7	< 2	2	2

## General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150771AA	03/18/2015 18	3:56	Linda C Pape	2
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150771AA	03/18/2015 19	9:20	Linda C Pape	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150771AA	03/18/2015 18	3:56	Linda C Pape	2
01163	CC/MS VOA Water Dren	SW-846 5030B	2	T150771AA	02/10/2015 10	.20	Linda C Dane	2.0



## Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-17D(117.00) Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802444 LL Group # 1544869

Account # 12152

Project Name: Fairfax 26140

Collected: 03/10/2015 10:30 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

#### 17117

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10335	t-Amyl methyl ether	994-05-8	120	20	20
10335	Benzene	71-43-2	< 20	20	20
10335	t-Butyl alcohol	75-65-0	3,300	400	20
10335	Ethyl t-butyl ether	637-92-3	< 20	20	20
10335	Ethylbenzene	100-41-4	< 20	20	20
10335	di-Isopropyl ether	108-20-3	350	20	20
10335	Methyl Tertiary Butyl	1634-04-4	8,700	200	200
	Ether				
10335	Toluene	108-88-3	< 20	20	20
10335	Xylene (Total)	1330-20-7	< 20	20	20

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150771AA	03/18/2015 19:44	Linda C Pape	20
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150771AA	03/18/2015 20:07	Linda C Pape	200
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150771AA	03/18/2015 19:44	Linda C Pape	20
01163	GC/MS VOA Water Pren	SW-846 5030B	2	T150771AA	03/18/2015 20:07	Linda C Pane	200



## **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-17D(129.75) Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802445

LL Group # 1544869 Account # 12152

Project Name: Fairfax 26140

Collected: 03/10/2015 11:00 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

17129

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10335	t-Amyl methyl ether	994-05-8	180	10	10
10335	Benzene	71-43-2	< 10	10	10
10335	t-Butyl alcohol	75-65-0	3,300	200	10
10335	Ethyl t-butyl ether	637-92-3	< 10	10	10
10335	Ethylbenzene	100-41-4	< 10	10	10
10335	di-Isopropyl ether	108-20-3	360	10	10
10335	Methyl Tertiary Butyl	1634-04-4	12,000	50	50
	Ether				
10335	Toluene	108-88-3	< 10	10	10
10335	Xylene (Total)	1330-20-7	< 10	10	10

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150772AA	03/19/2015	06:52	Christopher G Torres	50
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150781AA	03/19/2015	20:04	Linda C Pape	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150772AA	03/19/2015	06:52	Christopher G Torres	50
01163	GC/MS VOA Water Prep	SW-846 5030B	2	T150781AA	03/19/2015	20.04	Linda C Pape	1.0



## **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-17D(147.00) Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802446

LL Group # 1544869 Account # 12152

Project Name: Fairfax 26140

Collected: 03/10/2015 11:30 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

#### 17147

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor						
GC/MS	Volatiles SW-846 820	60B	ug/l	ug/l							
10335	t-Amyl methyl ether	994-05-8	280	50	50						
10335	Benzene	71-43-2	< 50	50	50						
10335	t-Butyl alcohol	75-65-0	9,500	1,000	50						
10335	Ethyl t-butyl ether	637-92-3	< 50	50	50						
10335	Ethylbenzene	100-41-4	< 50	50	50						
10335	di-Isopropyl ether	108-20-3	470	50	50						
10335	Methyl Tertiary Butyl	1634-04-4	25,000	500	500						
	Ether										
10335	Toluene	108-88-3	< 50	50	50						
10335	Xylene (Total)	1330-20-7	< 50	50	50						
but devi	within the marginal exceedance al ations as defined in the NELAC St	10335 Xylene (Total) 1330-20-7 < 50 50 50  The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: t-Amyl methyl ether									

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150772AA	03/19/2015 07:39	Christopher G Torres	50
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150772AA	03/19/2015 08:03	Christopher G Torres	500
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150772AA	03/19/2015 07:39	Christopher G Torres	50
01163	GC/MS VOA Water Prep	SW-846 5030B	2	T150772AA	03/19/2015 08:03	Christopher G Torres	500



## **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-26D(78) Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802447

LL Group # 1544869 Account # 12152

Project Name: Fairfax 26140

Collected: 03/10/2015 12:30 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

#### 26D78

CAT No.	Analysis Name		CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846	8260B	ug/l	ug/l	
10335	t-Amyl methyl ether		994-05-8	< 1	1	1
10335	Benzene		71-43-2	< 1	1	1
10335	t-Butyl alcohol		75-65-0	< 20	20	1
10335	Ethyl t-butyl ether		637-92-3	< 1	1	1
10335	Ethylbenzene		100-41-4	< 1	1	1
10335	di-Isopropyl ether		108-20-3	< 1	1	1
10335	Methyl Tertiary Buty	l Ether	1634-04-4	< 1	1	1
10335	Toluene		108-88-3	< 1	1	1
10335	Xylene (Total)		1330-20-7	< 1	1	1

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150771AA	03/18/2015 15:47	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150771AA	03/18/2015 15:47	Linda C Pape	1



## Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-25D(90) Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802448

LL Group # 1544869 Account # 12152

Project Name: Fairfax 26140

Collected: 03/10/2015 13:30 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

#### 25D90

CAT No.	Analysis Name		CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846	8260B	ug/l	ug/l	
10335	t-Amyl methyl ether		994-05-8	< 1	1	1
10335	Benzene		71-43-2	< 1	1	1
10335	t-Butyl alcohol		75-65-0	< 20	20	1
10335	Ethyl t-butyl ether		637-92-3	< 1	1	1
10335	Ethylbenzene		100-41-4	< 1	1	1
10335	di-Isopropyl ether		108-20-3	< 1	1	1
10335	Methyl Tertiary Buty	l Ether	1634-04-4	< 1	1	1
10335	Toluene		108-88-3	< 1	1	1
10335	Xylene (Total)		1330-20-7	< 1	1	1

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150771AA	03/18/2015 16:11	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150771AA	03/18/2015 16:11	Linda C Pape	1



## **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: W-7 Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802449

LL Group # 1544869 Account # 12152

Project Name: Fairfax 26140

Collected: 03/10/2015 14:00 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

GF-W7

CAT No.	Analysis Name		CAS Number	Result	Limit of Quantitation	Dilution Factor			
GC/MS	Volatiles	SW-846	8260B	ug/l	ug/l				
10335	t-Amyl methyl ether		994-05-8	< 1	1	1			
10335	Benzene		71-43-2	< 1	1	1			
10335	t-Butyl alcohol		75-65-0	< 20	20	1			
10335	Ethyl t-butyl ether		637-92-3	< 1	1	1			
10335	Ethylbenzene		100-41-4	< 1	1	1			
10335	di-Isopropyl ether		108-20-3	< 1	1	1			
10335	Methyl Tertiary Buty	l Ether	1634-04-4	< 1	1	1			
10335	Toluene		108-88-3	< 1	1	1			
10335	Xylene (Total)		1330-20-7	< 1	1	1			
The	The LCS and/or LCSD recoveries are outside the stated QC window								
but	within the marginal ex	ceedance	allowance of +/-	4 standard					
devi	ations as defined in t	he NELAC	Standards. The	following					

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

analytes are accepted based on this allowance: t-Amyl methyl ether

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	e	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150772AA	03/19/2015	01:21	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150772AA	03/19/2015	01:21	Christopher G	1



## **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: W-6 Grab Water LL Sample # WW 7802450

Great Falls, VA LL Group # 1544869 Fairfax Petroleum 26140 Account # 12152

Project Name: Fairfax 26140

Collected: 03/11/2015 09:20 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

GF-W6

CAT No.	Analysis Name		CAS Number	Result	Limit of Quantitatio	Dilution n Factor
GC/MS	Volatiles	SW-846	8260B	ug/l	ug/l	
10335	t-Amyl methyl ether		994-05-8	< 1	1	1
10335	Benzene		71-43-2	< 1	1	1
10335	t-Butyl alcohol		75-65-0	< 20	20	1
10335	Ethyl t-butyl ether		637-92-3	< 1	1	1
10335	Ethylbenzene		100-41-4	< 1	1	1
10335	di-Isopropyl ether		108-20-3	< 1	1	1
10335	Methyl Tertiary Buty	l Ether	1634-04-4	< 1	1	1
10335	Toluene		108-88-3	< 1	1	1
10335	Xylene (Total)		1330-20-7	< 1	1	1
The	LCS and/or LCSD recove	eries are	outside the state	ed QC window		
but	within the marginal ex	xceedance	allowance of +/-	4 standard		
devi	ations as defined in t	the NELAC	Standards. The	following		
anal	ytes are accepted base	ed on thi	s allowance: t-Amy	yl methyl ether		

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tim	ne	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150772AA	03/19/2015	01:45	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150772AA	03/19/2015	01:45	Christopher G	1



## Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-27S Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802451

LL Group # 1544869 Account # 12152

Project Name: Fairfax 26140

Collected: 03/11/2015 10:04 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

GF27S

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor					
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l						
10335	t-Amyl methyl ether	994-05-8	< 1	1	1					
10335	Benzene	71-43-2	< 1	1	1					
10335	t-Butyl alcohol	75-65-0	< 20	20	1					
10335	Ethyl t-butyl ether	637-92-3	< 1	1	1					
10335	Ethylbenzene	100-41-4	< 1	1	1					
10335	di-Isopropyl ether	108-20-3	< 1	1	1					
10335	Methyl Tertiary Butyl	1634-04-4	1	1	1					
	Ether									
10335	Toluene	108-88-3	< 1	1	1					
10335	Xylene (Total)	1330-20-7	< 1	1	1					
but devi	10335 Xylene (Total) 1330-20-7 < 1 1 1 1  The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: t-Amyl methyl ether									

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	9	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150772AA	03/19/2015 0	2:08	Christopher G	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150772AA	03/19/2015 0	02:08	Torres Christopher G	1



## Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-27I Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802452

LL Group # 1544869 Account # 12152

Project Name: Fairfax 26140

Collected: 03/11/2015 10:30 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

#### GF27I

CAT No.	Analysis Name		CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846	8260B	ug/l	ug/l	
10335	t-Amyl methyl ether		994-05-8	< 1	1	1
10335	Benzene		71-43-2	< 1	1	1
10335	t-Butyl alcohol		75-65-0	< 20	20	1
10335	Ethyl t-butyl ether		637-92-3	< 1	1	1
10335	Ethylbenzene		100-41-4	< 1	1	1
10335	di-Isopropyl ether		108-20-3	< 1	1	1
10335	Methyl Tertiary Buty	yl Ether	1634-04-4	< 1	1	1
10335	Toluene		108-88-3	< 1	1	1
10335	Xylene (Total)		1330-20-7	< 1	1	1
The	LCS and/or LCSD recov	veries are	outside the state	ed QC window		
but	within the marginal $\epsilon$	exceedance	allowance of +/-	4 standard		
devi	ations as defined in	the NELAC	Standards. The	following		
anal	ytes are accepted bas	sed on thi	s allowance: t-Am	yl methyl ether		

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150772AA	03/19/2015 02	:32	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150772AA	03/19/2015 02	:32	Christopher G	1



## **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-21S Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802453

LL Group # 1544869 Account # 12152

Project Name: Fairfax 26140

Collected: 03/11/2015 11:00 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

#### GF21S

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846 82	60B	ug/l	ug/l	
10335	t-Amyl methyl ether	994-05-8	8	2	2
10335	Benzene	71-43-2	< 2	2	2
10335	t-Butyl alcohol	75-65-0	610	40	2
10335	Ethyl t-butyl ether	637-92-3	< 2	2	2
10335	Ethylbenzene	100-41-4	< 2	2	2
10335	di-Isopropyl ether	108-20-3	17	2	2
10335	Methyl Tertiary Butyl	1634-04-4	910	20	20
	Ether				
10335	Toluene	108-88-3	< 2	2	2
10335	Xylene (Total)	1330-20-7	< 2	2	2
but devi	LCS and/or LCSD recoveries are or within the marginal exceedance al ations as defined in the NELAC St ytes are accepted based on this a	llowance of $+/-$ andards. The	4 standard following		

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150772AA	03/19/2015 06:05	Christopher G Torres	2
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150772AA	03/19/2015 06:29	Christopher G Torres	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150772AA	03/19/2015 06:05	Christopher G Torres	2
01163	GC/MS VOA Water Prep	SW-846 5030B	2	T150772AA	03/19/2015 06:29	Christopher G Torres	20



## **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-21I Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802454

LL Group # 1544869 Account # 12152

Project Name: Fairfax 26140

Collected: 03/11/2015 11:30 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

#### GF21I

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10335	t-Amyl methyl ether	994-05-8	15	2	2
10335	Benzene	71-43-2	< 2	2	2
10335	t-Butyl alcohol	75-65-0	1,000	40	2
10335	Ethyl t-butyl ether	637-92-3	< 2	2	2
10335	Ethylbenzene	100-41-4	< 2	2	2
10335	di-Isopropyl ether	108-20-3	22	2	2
10335	Methyl Tertiary Butyl	1634-04-4	1,300	50	50
	Ether				
10335	Toluene	108-88-3	< 2	2	2
10335	Xylene (Total)	1330-20-7	< 2	2	2

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150781AA	03/19/2015 16:5	55 Linda C Pape	50
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150791AA	03/20/2015 20:5	54 Linda C Pape	2
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150781AA	03/19/2015 16:5	55 Linda C Pape	50
01162	CC/MC VOA Water Bren	CM-846 EU3UD	2	T15070177	02/20/2015 20.5	1 Linda C Dane	2



## Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-23D Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802455

LL Group # 1544869 Account # 12152

Project Name: Fairfax 26140

Collected: 03/11/2015 12:36 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

#### GF23D

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846 826	50B	ug/l	ug/l	
10335	t-Amyl methyl ether	994-05-8	2	1	1
10335	Benzene	71-43-2	< 1	1	1
10335	t-Butyl alcohol	75-65-0	32	20	1
10335	Ethyl t-butyl ether	637-92-3	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	di-Isopropyl ether	108-20-3	11	1	1
10335	Methyl Tertiary Butyl	1634-04-4	200	1	1
	Ether				
10335	Toluene	108-88-3	27	1	1
10335	Xylene (Total)	1330-20-7	2	1	1
but	LCS and/or LCSD recoveries are ou within the marginal exceedance all	lowance of +/-	4 standard		

deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: t-Amyl methy $\bar{l}$  ether

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150772AA	03/19/2015 04:	06 Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150772AA	03/19/2015 04:	06 Christopher G Torres	1



## **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-15 Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Group # 1544869 Account # 12152

Project Name: Fairfax 26140

Collected: 03/11/2015 13:20 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

GF-15

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor			
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l				
10335	t-Amyl methyl ether	994-05-8	< 1	1	1			
10335	Benzene	71-43-2	< 1	1	1			
10335	t-Butyl alcohol	75-65-0	< 20	20	1			
10335	Ethyl t-butyl ether	637-92-3	< 1	1	1			
10335	Ethylbenzene	100-41-4	< 1	1	1			
10335	di-Isopropyl ether	108-20-3	21	1	1			
10335	Methyl Tertiary Butyl	1634-04-4	63	1	1			
	Ether							
10335	Toluene	108-88-3	< 1	1	1			
10335	Xylene (Total)	1330-20-7	< 1	1	1			
but devi	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: t-Amyl methyl ether							

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tim	ne	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150772AA	03/19/2015	04:54	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150772AA	03/19/2015	04:54	Christopher G	1



## Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: W-2 Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802457

LL Group # 1544869 Account # 12152

Project Name: Fairfax 26140

Collected: 03/11/2015 14:10 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

#### GF-W2

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10335	t-Amyl methyl ether	994-05-8	9	2	2
10335	Benzene	71-43-2	< 2	2	2
10335	t-Butyl alcohol	75-65-0	84	40	2
10335	Ethyl t-butyl ether	637-92-3	< 2	2	2
10335	Ethylbenzene	100-41-4	< 2	2	2
10335	di-Isopropyl ether	108-20-3	20	2	2
10335	Methyl Tertiary Butyl	1634-04-4	1,000	50	50
	Ether				
10335	Toluene	108-88-3	< 2	2	2
10335	Xylene (Total)	1330-20-7	< 2	2	2

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150781AA	03/19/2015 17:43	Linda C Pape	50
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150791AA	03/20/2015 21:1	7 Linda C Pape	2
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150781AA	03/19/2015 17:43	Linda C Pape	50
01163	CC/MS VOA Water Dren	SW-846 5030B	2	T150791AA	02/20/2015 21.1	7 I.inda C Dane	2



## Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-24 Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802458

LL Group # 1544869 Account # 12152

Project Name: Fairfax 26140

Collected: 03/12/2015 06:56 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

GF-24

CAT No.	Analysis Name		CAS Number	Result	Limit of Quantitation	Dilution Factor		
GC/MS	Volatiles :	SW-846	8260B	ug/l	ug/l			
10335	t-Amyl methyl ether		994-05-8	< 1	1	1		
10335	Benzene		71-43-2	< 1	1	1		
10335	t-Butyl alcohol		75-65-0	< 20	20	1		
10335	Ethyl t-butyl ether		637-92-3	< 1	1	1		
10335	Ethylbenzene		100-41-4	< 1	1	1		
10335	di-Isopropyl ether		108-20-3	< 1	1	1		
10335	Methyl Tertiary Bu	tyl	1634-04-4	2	1	1		
	Ether	_						
10335	Toluene		108-88-3	< 1	1	1		
10335	Xylene (Total)		1330-20-7	< 1	1	1		
but devi	0335 Xylene (Total) 1330-20-7 < 1 1 1 1  The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: t-Amyl methyl ether							

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	e	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150772AA	03/19/2015 (	02:56	Christopher G	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150772AA	03/19/2015	02:56	Torres Christopher G Torres	1



## Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: PW-1(65) Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802459 LL Group # 1544869

Account # 12152

Project Name: Fairfax 26140

Collected: 03/12/2015 07:34 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

#### PW165

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10335	t-Amyl methyl ether	994-05-8	21	1	1
10335	Benzene	71-43-2	< 1	1	1
10335	t-Butyl alcohol	75-65-0	70	20	1
10335	Ethyl t-butyl ether	637-92-3	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	di-Isopropyl ether	108-20-3	100	1	1
10335	Methyl Tertiary Butyl	1634-04-4	460	20	20
	Ether				
10335	Toluene	108-88-3	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150781AA	03/19/2015 18:3	) Linda C Pape	20
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150791AA	03/20/2015 21:4:	L Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150781AA	03/19/2015 18:3	) Linda C Pape	20
01162	CC/MC VOA Water Bren	CM-846 EU3UD	2	T15070177	02/20/2015 21.4	Linda C Bane	1



## Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: W-1 Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802460

LL Group # 1544869 Account # 12152

Project Name: Fairfax 26140

Collected: 03/12/2015 08:10 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

GF-W1

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10335	t-Amyl methyl ether	994-05-8	110	20	20
10335	Benzene	71-43-2	< 20	20	20
10335	t-Butyl alcohol	75-65-0	9,100	400	20
10335	Ethyl t-butyl ether	637-92-3	< 20	20	20
10335	Ethylbenzene	100-41-4	< 20	20	20
10335	di-Isopropyl ether	108-20-3	120	20	20
10335	Methyl Tertiary Butyl	1634-04-4	11,000	500	500
	Ether				
10335	Toluene	108-88-3	< 20	20	20
10335	Xylene (Total)	1330-20-7	< 20	20	20

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150781AA	03/19/2015 19:17	Linda C Pape	500
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150801AA	03/21/2015 18:40	Linda C Pape	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150781AA	03/19/2015 19:17	Linda C Pape	500
01163	GC/MS VOA Water Prep	SW-846 5030B	2	T150801AA	03/21/2015 18:40	Linda C Pape	20



## Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: RW-1 Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802461 LL Group # 1544869

Account # 12152

Project Name: Fairfax 26140

Collected: 03/12/2015 10:20 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

#### GF-R1

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10335	t-Amyl methyl ether	994-05-8	100	20	20
10335	Benzene	71-43-2	< 20	20	20
10335	t-Butyl alcohol	75-65-0	1,800	400	20
10335	Ethyl t-butyl ether	637-92-3	< 20	20	20
10335	Ethylbenzene	100-41-4	< 20	20	20
10335	di-Isopropyl ether	108-20-3	200	20	20
10335	Methyl Tertiary Butyl	1634-04-4	7,200	200	200
	Ether				
10335	Toluene	108-88-3	< 20	20	20
10335	Xylene (Total)	1330-20-7	< 20	20	20

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150791AA	03/20/2015 18:32	Linda C Pape	20
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150791AA	03/20/2015 18:55	Linda C Pape	200
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150791AA	03/20/2015 18:32	Linda C Pape	20
01163	GC/MS VOA Water Prep	SW-846 5030B	2	T150791AA	03/20/2015 18:55	Linda C Pape	200



## Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-20D(73-83) Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802462

LL Group # 1544869 Account # 12152

Project Name: Fairfax 26140

Collected: 03/12/2015 09:50 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

#### 20D73

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10335	t-Amyl methyl ether	994-05-8	8	2	2
10335	Benzene	71-43-2	< 2	2	2
10335	t-Butyl alcohol	75-65-0	340	40	2
10335	Ethyl t-butyl ether	637-92-3	< 2	2	2
10335	Ethylbenzene	100-41-4	< 2	2	2
10335	di-Isopropyl ether	108-20-3	15	2	2
10335	Methyl Tertiary Butyl	1634-04-4	740	20	20
	Ether				
10335	Toluene	108-88-3	< 2	2	2
10335	Xylene (Total)	1330-20-7	< 2	2	2

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150791AA	03/20/2015 19:3	L9 Linda C Pape	2
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150791AA	03/20/2015 19:4	13 Linda C Pape	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150791AA	03/20/2015 19:3	L9 Linda C Pape	2
01163	CC/MS VOA Water Dren	SW-846 5030B	2	T150791AA	03/20/2015 10.	12 Linda C Dane	2.0



## Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-20D(90-100) Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802463

LL Group # 1544869 Account # 12152

Project Name: Fairfax 26140

Collected: 03/12/2015 09:20 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

20D90

CAT No.	Analysis Name		CAS Number	Result	Limit of Quantitation	Dilution Factor			
GC/MS	Volatiles	SW-846	8260B	ug/l	ug/l				
10335	t-Amyl methyl ether		994-05-8	< 1	1	1			
10335	Benzene		71-43-2	< 1	1	1			
10335	t-Butyl alcohol		75-65-0	< 20	20	1			
10335	Ethyl t-butyl ether		637-92-3	< 1	1	1			
10335	Ethylbenzene		100-41-4	< 1	1	1			
10335	di-Isopropyl ether		108-20-3	< 1	1	1			
10335	Methyl Tertiary B	utyl	1634-04-4	1	1	1			
	Ether								
10335	Toluene		108-88-3	< 1	1	1			
10335	Xylene (Total)		1330-20-7	< 1	1	1			
but devi	10335 Xylene (Total) 1330-20-7 < 1 1 1 1  The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: t-Amyl methyl ether								

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tim	ıe.	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150772AA	03/19/2015	03:19	Christopher G	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150772AA	03/19/2015	03:19	Torres Christopher G	1



## Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-20D(132-142) Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802464

LL Group # 1544869 Account # 12152

Project Name: Fairfax 26140

Collected: 03/12/2015 08:50 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 09:29

#### 20132

CAT No.	Analysis Name		CAS Number Result		Limit of Quantitation	Dilution Factor
GC/MS	Volatiles S	W-846	8260B	ug/l	ug/l	
10335	t-Amyl methyl ether		994-05-8	< 1	1	1
10335	Benzene		71-43-2	< 1	1	1
10335	t-Butyl alcohol		75-65-0	< 20	20	1
10335	Ethyl t-butyl ether		637-92-3	< 1	1	1
10335	Ethylbenzene		100-41-4	< 1	1	1
10335	di-Isopropyl ether		108-20-3	< 1	1	1
10335	Methyl Tertiary Butyl	Ether	1634-04-4	< 1	1	1
10335	Toluene		108-88-3	< 1	1	1
10335	Xylene (Total)		1330-20-7	< 1	1	1
The	LCS and/or LCSD recover	ries are	outside the state	ed QC window		
but	within the marginal exc	ceedance	allowance of $+/-$	4 standard		
devi	ations as defined in th	he NELAC	Standards. The	following		
anal	ytes are accepted based	d on this	s allowance: t-Amy	yl methyl ether		

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150772AA	03/19/2015 03	3:43	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150772AA	03/19/2015 03	3:43	Christopher G	1



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### Quality Control Summary

Client Name: Kleinfelder Group Number: 1544869

Reported: 03/24/2015 09:29

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank <u>LOO</u>	Report <u>Units</u>	LCS <u>%REC</u>	LCSD %REC	LCS/LCSD <u>Limits</u>	RPD	RPD <u>Max</u>
Batch number: T150771AA	Sample nu	mber(s): 78	02439-7802	2441,7802	443-780244	4,7802447-78	02448	
t-Amyl methyl ether	< 1	1.	ug/l	96	96	75-120	0	30
Benzene	< 1	1.	ug/l	116	117	78-120	1	30
t-Butyl alcohol	< 20	20.	ug/l	112	111	78-121	0	30
Ethyl t-butyl ether	< 1	1.	ug/l	105	106	69-120	1	30
Ethylbenzene	< 1	1.	ug/l	104	105	80-120	0	30
di-Isopropyl ether	< 1	1.	ug/l	114	115	70-124	1	30
Methyl Tertiary Butyl Ether	< 1	1.	ug/l	99	100	75-120	1	30
Toluene	< 1	1.	ug/l	104	103	80-120	0	30
Xylene (Total)	< 1	1.	ug/l	93	94	80-120	1	30
Batch number: T150772AA		mber(s): 78 802458,7802			449-780245	3,7802455-		
t-Amyl methyl ether	< 1	1.	ug/l	73*	71*	75-120	3	30
Benzene	< 1	1.	ug/l	114	109	78-120	4	30
t-Butyl alcohol	< 20	20.	uq/l	113	114	78-121	1	30
Ethyl t-butyl ether	< 1	1.	ug/l	87	86	69-120	1	30
Ethylbenzene	< 1	1.	ug/l	106	101	80-120	5	30
di-Isopropyl ether	< 1	1.	ug/l	109	107	70-124	3	30
Methyl Tertiary Butyl Ether	< 1	1.	uq/l	94	92	75-120	2	30
Toluene	< 1	1.	uq/l	104	100	80-120	4	30
Xylene (Total)	< 1	1.	ug/l	92	89	80-120	3	30
Batch number: T150781AA	Sample nu	mber(s): 78	02442,7802	2445,7802	454,780245	7,7802459-78	02460	
t-Amyl methyl ether	< 1	1.	uq/l	83	80	75-120	3	30
Benzene	< 1	1.	ug/l	115	112	78-120	2	30
t-Butyl alcohol	< 20	20.	ug/l	115	115	78-121	0	30
Ethyl t-butyl ether	< 1	1.	uq/l	97	97	69-120	0	30
Ethylbenzene	< 1	1.	ug/l	112	108	80-120	3	30
di-Isopropyl ether	< 1	1.	ug/l	112	111	70-124	1	30
Methyl Tertiary Butyl Ether	< 1	1.	uq/l	97	97	75-120	1	30
Toluene	< 1	1.	uq/l	110	108	80-120	2	30
Xylene (Total)	< 1	1.	ug/l	96	94	80-120	2	30
Batch number: T150791AA	Sample nu	mber(s): 78	02454,7802	457,7802	459,780246	1-7802462		
t-Amyl methyl ether	< 1	1.	ug/l	90	93	75-120	3	30
Benzene	< 1	1.	uq/l	111	115	78-120	4	30
t-Butyl alcohol	< 20	20.	ug/l	109	112	78-121	3	30
Ethyl t-butyl ether	< 1	1.	ug/l	101	105	69-120	3	30
Ethylbenzene	< 1	1.	uq/l	108	116	80-120	7	30
di-Isopropyl ether	< 1	1.	ug/l	113	116	70-124	2	30
Methyl Tertiary Butyl Ether	< 1	1.	ug/l	98	101	75-120	3	30
Toluene	< 1	1.	ug/l	106	116	80-120	9	30
Xylene (Total)	< 1	1.	ug/l	95	102	80-120	8	30

#### \*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



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## Quality Control Summary

Client Name: Kleinfelder Group Number: 1544869

Reported: 03/24/2015 09:29

1100000000 00,001,0000 00,00	Blank	Blank	Report	LCS	LCSD	LCS/LCSD		RPD
Analysis Name	Result	LOO	<u>Units</u>	%REC	%REC	Limits	<u>RPD</u>	<u>Max</u>
Batch number: T150801AA	Sample numbe	er(s): 780	2460					
t-Amyl methyl ether	< 1	1.	ug/l	87	89	75-120	2	30
Benzene	< 1	1.	ug/l	109	111	78-120	2	30
t-Butyl alcohol	< 20	20.	ug/l	114	115	78-121	1	30
Ethyl t-butyl ether	< 1	1.	ug/l	101	101	69-120	1	30
Ethylbenzene	< 1	1.	ug/l	109	106	80-120	3	30
di-Isopropyl ether	< 1	1.	ug/l	111	113	70-124	2	30
Toluene	< 1	1.	ug/l	106	106	80-120	1	30
Xylene (Total)	< 1	1.	ug/l	95	93	80-120	2	30

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
<u></u>	<u> </u>	02120				<u></u>	<u></u>	<u></u>	
Batch number: T150772AA			: 7802445 7802463-7			449-7802453 P806123	,7802455-		
t-Amyl methyl ether	68	73	65-117	8	30				
Benzene	108	115	72-134	7	30				
t-Butyl alcohol	102	112	67-119	9	30				
Ethyl t-butyl ether	82	90	74-122	10	30				
Ethylbenzene	100	107	71-134	7	30				
di-Isopropyl ether	102	111	70-129	9	30				
Methyl Tertiary Butyl Ether	86	94	72-126	9	30				
Toluene	99	107	80-125	8	30				
Xylene (Total)	87	94	79-125	7	30				
Batch number: T150781AA	Sample	number(s)	. 7802442	78024	45 7802	454 7802457	7802459-78	02460 UNSPK:	P792150
t-Amyl methyl ether	86	89	65-117	3	30	131,7002137	, , , , , , , , , , , , , , , , , , , ,	OZIOO ONDIIC	. 1752150
Benzene	115	114	72-134	1	30				
t-Butyl alcohol	103	104	67-119	1	30				
Ethyl t-butyl ether	97	97	74-122	0	30				
Ethylbenzene	-19 (2)		71-134	4	30				
di-Isopropyl ether	110	110	70-129	0	30				
Methyl Tertiary Butyl Ether	94	95	72-126	1	30				
Toluene	110	104	80-125	1	30				
Xylene (Total)	22 (2)	-17 (2)	79-125	3	30				
Batch number: T150791AA	Sample	number(s)	. 7802454	78024	57 7802	459 7802461	-7802462 IIN	SPK: P805178	3
t-Amyl methyl ether	95	91	65-117	4	30	133,7002101	7002102 01	5111. 1005170	
Benzene	124	120	72-134	3	3.0				
t-Butyl alcohol	117	106	67-119	10	30				
Ethyl t-butyl ether	109	107	74-122	2	30				
Ethylbenzene	121	117	71-134	3	30				
di-Isopropyl ether	121	117	70-129	4	30				
Methyl Tertiary Butyl Ether	105	102	72-126	3	30				
Toluene	117	115	80-125	2	30				
Xylene (Total)	102	101	79-125	0	30				

<sup>\*-</sup> Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



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### Quality Control Summary

Client Name: Kleinfelder Group Number: 1544869

Reported: 03/24/2015 09:29

#### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX + 5 Oxys Batch number: T150771AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7802439	109	96	92	97
7802440	110	96	93	99
7802441	110	96	92	97
7802443	111	97	93	97
7802444	110	97	90	97
7802447	110	96	93	98
7802448	110	97	93	97
Blank	109	97	93	97
LCS	107	97	95	103
LCSD	106	94	94	102
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX + 5 Oxys

Batch number: T150772AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7802446	109	95	98	100
7802449	106	94	95	100
7802450	107	96	96	100
7802451	107	98	95	97
7802452	107	94	98	102
7802453	110	94	95	100
7802455	109	94	96	98
7802456	110	96	95	98
7802458	109	95	96	99
7802463	109	95	94	99
7802464	109	96	96	100
Blank	106	96	97	98
LCS	106	93	95	100
LCSD	105	94	95	101
MS	108	95	95	100
MSD	105	96	97	100
Limits	80-116	77-113	80-113	78-113

Analysis Name: BTEX + 5 Oxys

Batch number: T150781AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7802442	99	95	98	97
7802445	98	95	100	101
Blank	107	96	96	98
LCS	104	94	99	105
LCSD	103	94	97	101
MS	100	94	100	104
MSD	100	94	97	101
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX + 5 Oxys Batch number: T150791AA

#### \*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



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### Quality Control Summary

Client Name: Kleinfelder Group Number: 1544869

Reported: 03/24/2015 09:29

### Surrogate Quality Control

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene	
7802454	110	96	98	103	
7802457	110	96	97	101	
7802459	108	93	97	102	
7802461	104	92	96	101	
7802462	106	92	97	102	
Blank	105	94	98	101	
LCS	104	94	99	105	
LCSD	103	95	103	108	
MS	107	94	97	105	
MSD	104	94	99	107	
Limits:	80-116	77-113	80-113	78-113	

Analysis Name: BTEX + 5 Oxys Batch number: T150801AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene	
7802460	109	94	98	101	
Blank	110	95	101	103	
LCS	107	94	101	105	
LCSD	106	93	99	103	
Limits:	80-116	77-113	80-113	78-113	

(2) The unspiked result was more than four times the spike added.

<sup>\*-</sup> Outside of specification

<sup>(1)</sup> The result for one or both determinations was less than five times the LOQ.





For Lancaster La	boratories use	e only Acct. #: 12152
Group #:	Sam	ple #:
·	1544869	78021139-64

Client: Fairfax Petroleum Acct. #:						Mati	rix						Analys	ses Rec	uested					b Use C	Only
Project Name/#: Great Falls	— PWSID #:												Prese	rvation	Codes				FSC:		
Project Manager: Mark C. Steele	— P.O. #:	51141-3047	775			<u>e</u>	SI		- I .	Ž	/								SCR#:		
Sampler: Tim Boswell	 Quote #:					Potable	NPDES												Preservation Co	odes	
	<b></b>								ত					\$				:	H=HCI T=T N=HNO3 B=N S=H2SO4 O=C	Thiosulfate NaOH Other	ŧ.
Name of State where samples were collected:	Virginia						$\dashv$		ine	(00										-	n recei
									Containers	oxy (8260)											odn sə
				ite					of C	οχλ			ý.							Î	samp
				sod		-	.	_	##	+		1	E.								ature of sted)
	Date Collected	Time Collected	Grab	Composite	Soil	Water		Other	Total	ВТЕХ									Remar	ks	emper f reque
Sample Identification			X	0	S	X			3	X									1		Fü
HW170(75.00)	3/9/15	1000	X			X		$\dashv$	3	X		+							Co	<del>}\~`</del>	
MW-17 0(81.00)	3/9/15	1100	X			X	$\rightarrow$	-	2	X						<del>                                     </del>			$\dagger$		
nu-170 (87.75)	3/9/15	1230	X			X	_		3	X		1			<u> </u>		·				
thurs (92.00)	3915	1310	X	$\vdash$		X			3	X											
The 60 (95)	3/10/15	1000	X			X		$\Box$	3	X		<del> </del>							T	<b>†</b>	
MW-170(117.00)	3/10/15	1100	X			X		$\Box$	3	X										1	- 4
HW-170(129.75)	3/10/15	1130	X			X			3	X		<del> </del>				<u> </u>					$\overline{}$
MW-170 (147.00)	3/10/15	1230	X		_	X		$\vdash$	3	Х										l ai	2
MW-267(78)	3/10/15	1230	X			Х			ъ	Х											
Mw250(90)	3/10/15		X			X	-		3	X											
W-0	3/19/12	0920	X	$\vdash$		X	_	$\vdash$	3	X										V	
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Date results are needed:	ar onar go.,					Ī	Reli	inqui	shec	l by:			3/(L Date		Time		Receiv	ed by:			Time
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Type II (Tier II) MA MCP CT RCP							Reli	inqui	shed	y: 🔻	\		Date		Time		Receiv	ed by:		Date	Time
	cific QC (MS/N	ISD/Dup)? `	es/	١	۷o																
,	ted QC sample ar			olume)	)		Reli	inqui	shed	by:			Date		Time		Receiv	ed by:		Date / /	Time
	OC required?																My	5		3/12/15	1625

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### Analysis Request/Environmental Services Chain of Custody

For Lancaster Lat	ooratories use	only Acct. #: 12152
		ple #:
19	544869	7802439-64

Client: Fairfax Petroleum	Acct. #:					Ma	trix					Analyses Re	quested		For L	For Lab Use Only		
Project Name/#: Great Falls	PWSID #:											 Preservatio	n Codes		FSC:			
Project Manager: Mark C. Steele	P.O. #:	51141-3047	775			ole	S			Ž					SCR#	:		
Sampler: Tim Boswell	Quote #:			,		Potable	NPDES								Preservation	Codes		
Name of State where samples were collected:	Virginia								ers						H=HCI T N=HNO3 B S=H2SO4 O	Γ=Thiosulfate β=NaOH β=Other	eipt	
									Containers	oxy (8260)							on rece	
				9					Cor	y (8							dn səldi	
				osit					t of	ŏ +							of sam	
	Date	Time	Grab	Composite	=	Water		Other	Total #	втех							erature uested)	
Sample Identification	Collected	Collected	Gr	ပိ	So			Ot	1º	ВТ					Rema	rks	Temp (if req	
MW-275	3/11/15	1004	Х			Х			3	Х						1	^	
HW-27I	3)11/18	1030	Х			Х			3	Х						المحالون		
Mw. 215	3/11/15	1150	Х			Х			3	Х								
17W-21I	3/11/15	1130	Х			Х			3	Х								
HW-230	3/11/15	1236	Х			Х			3	Х								
MW 15	3/11/15	1300	Х			Х			3	Х								
W-2	3/11/15	1410	Х			Х			3	Х								
Hw-24	3/12/15	ిటర్వ	Х			Х	$\rightarrow$		3	Х								
PW-1(65)	3/12/15	0734	Х			Х			3	Х						1/1	オノ	
M-1 ,	3/12/15	<u>୭</u> ८१७	Х			Х			3	Χ								
PW-1	3/12/15	1020	Х			Х			3	Χ								
MW-200(75-83)	3/11/15	0950	Х			Х			3	Χ						4		
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Phone #:Fax #:						ľ	Relir	nquis	shed	by:		Date	Time	Received b	y:	Date	Time	
E-mail address: mcsteele@k	<u>leinfelder.co</u>								$\underline{()}$	1	_	 7/11/10						
Data Package Options (please circle if required)		SDG Comp	lete?	>		ľ	Relir	nquis	shed	by:		Date	Time	Received b	y:	Date	Time	
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Type II (Tier II) MA MCP CT RCP				_	Relir	nquis	shed	by:		Date	Time	Received b	ıy:	Date	Time			
Type III (Reduced NJ)  State-specific QC (MS/MSD/Dup)? Yes No				L														
	ed QC sample an	•	te vol	lume)			Relir	nquis	shed	by:		Date	Time	Received b	•	1 : 1	Time	
e VI (Raw Data Only) Internal COC required? Yes No												1 1/1/5	<i>-</i>	13/12/15	1625			

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### Analysis Request/Environmental Services Chain of Custody

For Lancaster Laboratories use or Group #: \_\_\_\_\_ Sample 1544869

only Acct. #: _	12152	
e#:	64	

Client:	Fairfax Peti	roleum	Acct. #:					Mat	rix			Analyses Requested									For Lab Use Only		
Project Nam	 ne/#:	26140	 PWSID #:												Prese	rvation	Codes	i.			FSC:		
Project Man	ager:	Mark C. Steele	— Р.О. #:	51141-3047	75			<u>e</u>	္က		- !	*	/								SCR#:		
Sampler:	TIM	Barwell	Quote #:					Potable	NPDES												Preservation Co	des hiosulfate	
Name of Sta	ite where sa	mples were collected:	Virginia								ners	tes									N=HNO3 B=N S=H2SO4 O=O	aOH	eceipt
Sample Ide	ntification		Date Collected	Time Collected	Grab	Composite	Soil	Water		Other	Total # of Containers	BTEX + Oxygenates									Remar	ks	Temperature of samples upon r (if requested)
	MW-2	00190-100)	3/12/15	0923	X			X			3	X											
	MW-	200(132-142)	3/12/15	0850	Х			Х	_		$\mathcal{B}$	X										مراحرا	<i>(</i>
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Date results	are needed	:					_	ľ	Relii	nquis	shed	by:			1		Time	. —	Receive	•			Time
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		(please circle if required)		SDG Comp	lete'	?			Relii	nquis	shed	by:			Date		Time		Receive	ed(by:		Date	Time
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Type IV (CL	· ·		ted QC sample an		ate vo	olume)	)	ľ	Kelli	iquis	shed	υy.			Date		Time		The Celt	eg by.			1625
Type VI (Rav	w Data Only)		OC required?		05.					20.5	<u>1</u>	0.405 1	<del></del>	DA 41	7005.046	)E 747	050.00	00	PM	<u> </u>		기내	1000

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## **Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

RL N.D.	Reporting Limit none detected	BMQL MPN	Below Minimum Quantitation Level Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
μg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

less than <

greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Results printed under this heading have been adjusted for moisture content. This increases the analyte weight Dry weight basis

concentration to approximate the value present in a similar sample without moisture. All other results are reported on an

as-received basis.

#### Laboratory Data Qualifiers:

B - Analyte detected in the blank

C - Result confirmed by reanalysis

E - Concentration exceeds the calibration range

J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and the < Limit of Quantitation (LOQ or RL)

P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.

U - Analyte was not detected at the value indicated

V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

#### Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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#### ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 Kleinfelder 550 West C Street, Suite 1200 San Diego CA 92101

March 24, 2015

**Project: Fairfax 26140** 

Submittal Date: 03/12/2015 Group Number: 1544870 PO Number: 51141-304775 State of Sample Origin: VA

Client Sample DescriptionLancaster Labs (LL) #MW-1 Grab Water7802465

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <a href="http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/">http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/</a>.

**ELECTRONIC** Kleinfelder Attn: Mark Steele COPY TO **ELECTRONIC** Kleinfelder Attn: Venelda Williams COPY TO ELECTRONIC Kleinfelder Attn: Paxton Wertz COPY TO **ELECTRONIC** Kleinfelder Attn: Nathan Stevens COPY TO **ELECTRONIC** Kleinfelder Attn: Jennifer Kozak COPY TO

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Respectfully Submitted,

Amek Carter Specialist

(717) 556-7252



## Analysis Report

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Sample Description: MW-1 Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7802465 LL Group # 1544870

Account # 12152

Project Name: Fairfax 26140

Collected: 03/11/2015 14:30 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/12/2015 16:25 Reported: 03/24/2015 11:06

#### GF-01

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10335	t-Amyl methyl ether	994-05-8	20	5	5
10335	Benzene	71-43-2	< 5	5	5
10335	t-Butyl alcohol	75-65-0	180	100	5
10335	Ethyl t-butyl ether	637-92-3	< 5	5	5
10335	Ethylbenzene	100-41-4	< 5	5	5
10335	di-Isopropyl ether	108-20-3	23	5	5
10335	Methyl Tertiary Butyl	1634-04-4	2,800	10	10
	Ether				
10335	Toluene	108-88-3	< 5	5	5
10335	Xylene (Total)	1330-20-7	< 5	5	5

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150791AA	03/20/2015 20:0	6 Linda C Pape	10
10335	BTEX + 5 Oxys	SW-846 8260B	1	T150822AA	03/24/2015 06:0	1 Christopher G Torres	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150791AA	03/20/2015 20:0	6 Linda C Pape	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	T150822AA	03/24/2015 06:0	1 Christopher G	5



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### Quality Control Summary

Client Name: Kleinfelder Group Number: 1544870

Reported: 03/24/2015 11:06

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

#### Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank <u>LOO</u>	Report <u>Units</u>	LCS <u>%REC</u>	LCSD %REC	LCS/LCSD <u>Limits</u>	RPD	RPD <u>Max</u>
Batch number: T150791AA Methyl Tertiary Butyl Ether	Sample numb	er(s): 780 1.	02465 ug/l	98	101	75-120	3	30
Batch number: T150822AA	Sample numb	er(s): 780	2465					
t-Amyl methyl ether	< 1	1.	uq/l	92	92	75-120	0	30
Benzene	< 1	1.	ug/l	106	107	78-120	0	30
t-Butyl alcohol	< 20	20.	uq/l	113	113	78-121	0	30
Ethyl t-butyl ether	< 1	1.	ug/l	100	99	69-120	1	30
Ethylbenzene	< 1	1.	ug/l	106	104	80-120	2	30
di-Isopropyl ether	< 1	1.	ug/l	107	107	70-124	0	30
Toluene	< 1	1.	ug/l	105	104	80-120	2	30
Xylene (Total)	< 1	1.	ug/l	94	93	80-120	1	30

#### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	%REC	%REC	Limits	<u>RPD</u>	MAX	Conc	Conc	RPD	Max
Batch number: T150791AA	Sample r	number(s):	7802465	UNSPK:	P80517	'8			

Batch number: T150791AA Sample number(s): 7802465 UNSPK: P805178
Methyl Tertiary Butyl Ether 105 102 72-126 3 30

#### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX + 5 Oxys Batch number: T150822AA

200011 110	IIIOOODDIII				
	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene	
7802465	104	94	98	98	
Blank	103	96	99	101	
LCS	102	94	98	103	
LCSD	103	92	100	104	
Limits:	80-116	77-113	80-113	78-113	

#### \*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



## Analysis Report

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### Quality Control Summary

Client Name: Kleinfelder Group Number: 1544870

Reported: 03/24/2015 11:06

<sup>\*-</sup> Outside of specification

<sup>(1)</sup> The result for one or both determinations was less than five times the LOQ.

<sup>(2)</sup> The unspiked result was more than four times the spike added.





For Lancaster La	aboratories us	e only Acct. #: _	12/52
Group #	San	nple #:	(
• ,	544870	780246	5

Client: Fairfax Pet	roleum	Acct. #:					Mat	latrix				Analyses Requested						For Lab Use Only				
Project Name/#:	Great Falls	PWSID #:	,											Preser	vation	Codes				FSC:		
Project Manager:	Mark C. Steele	— Р.О. #:	51141-3047	75			e l	ရှု			Ž									SCR#:		
Sampler:	Bowell	 Quote #:					Potable	NPDES												Preservation Co	odes	
Name of State where sa	amples were collected:	Virginia								ers										H=HCI T=TI N=HNO3 B=N S=H2SO4 O=O	Thiosulfate NaOH Other	iipt
Traine of Grade Wileie		1 9						$\neg$		ain	(097											on rece
					e.					of Containers	oxy (8260)											samples upon
					Composite					# of	+											re of sa d)
		Date	Time	Grab	l mc	lic	Water		Other	Total #	втех											peratu
Sample Identification	<b>.</b>	Collected	Collected		ŏ	Sc			ō	ĭ										Remar	KS	Ten (if re
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				X			X			$\vdash$	X										+	
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Type III (Reduced NJ)	State-spe	cific QC (MS/M	SD/Dup)? Y	es	١	lo																
Type IV (CLP SOW) (If yes, indicated QC sample and submit triplecate volume)						Relinquished by:				Date		Time Received by:			Date	Time						
Type VI (Raw Data Only)	Internal C	OC required?	Yes No															Kry	H	-	3/12/15	1623

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10f1



## **Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
μg	microgram(s)	mg	milligram(s)
mĹ	milliliter(s)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

< less than

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an

as-received basis.

#### Laboratory Data Qualifiers:

B - Analyte detected in the blank

C - Result confirmed by reanalysis

E - Concentration exceeds the calibration range

J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and the < Limit of Quantitation (LOQ or RL)

P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.

U - Analyte was not detected at the value indicated

V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

## Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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### ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601

Kleinfelder 550 West C Street, Suite 1200 San Diego CA 92101

April 01, 2015

**Project: Great Falls, VA** 

Submittal Date: 03/27/2015 Group Number: 1548950 PO Number: 51141-304775 State of Sample Origin: VA

Client Sample Description

Lancaster Labs (LL) #

7824790

MW-20D (73-83) Grab Water

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofinslancaster-laboratories-environmental/resources/certifications/.

ELECTRONIC	Kleinfelder	Attn: Jennifer Kozak
COPY TO		
ELECTRONIC	Kleinfelder	Attn: Nathan Stevens
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ELECTRONIC	Kleinfelder	Attn: Paxton Wertz
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ELECTRONIC	Kleinfelder	Attn: Venelda Williams
COPY TO		
ELECTRONIC	Kleinfelder	Attn: Mark Steele
COPY TO		

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Respectfully Submitted,

Amek Carter Specialist

(717) 556-7252



# Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax; 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-20D (73-83) Grab Water

Great Falls, VA

LL Sample # WW 7824790 LL Group # 1548950 Account # 12152

Project Name: Great Falls, VA

Collected: 03/27/2015 13:10 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/27/2015 17:36 Reported: 04/01/2015 10:14

### MW20D

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846 8	260B	ug/l	ug/l	
10335	t-Amyl methyl ether	994-05-8	18	1	1
10335	Benzene	71-43-2	< 1	1	1
10335	t-Butyl alcohol	75-65-0	480	20	1
10335	Ethyl t-butyl ether	637-92-3	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	di-Isopropyl ether	108-20-3	24	1	1
10335	Methyl Tertiary Butyl	1634-04-4	1,400	20	20
	Ether				
10335	Toluene	108-88-3	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1
A po	sitive result for residual chlor	ine was detecte	d in the sample		
cont	ainer used for analysis.				

container used for analysis.

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	BTEX + 5 Oxys	SW-846 8260B	1	E150901AA	03/31/2015 09:57	Jason M Long	1
10335	BTEX + 5 Oxys	SW-846 8260B	1	E150901AA	03/31/2015 10:18	Jason M Long	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E150901AA	03/31/2015 09:57	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	E150901AA	03/31/2015 10:18	Jason M Long	20



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### Quality Control Summary

Client Name: Kleinfelder Group Number: 1548950

Reported: 04/01/2015 10:14

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank <u>LOO</u>	Report <u>Units</u>	LCS <u>%REC</u>	LCSD %REC	LCS/LCSD <u>Limits</u>	RPD	RPD <u>Max</u>
Batch number: E150901AA	Sample numb	er(s): 782	24790					
t-Amyl methyl ether	< 1	1.	ug/l	94		75-120		
Benzene	< 1	1.	ug/l	91		78-120		
t-Butyl alcohol	< 20	20.	ug/l	99		78-121		
Ethyl t-butyl ether	< 1	1.	ug/l	96		69-120		
Ethylbenzene	< 1	1.	ug/l	91		80-120		
di-Isopropyl ether	< 1	1.	ug/l	96		70-124		
Methyl Tertiary Butyl Ether	< 1	1.	ug/l	93		75-120		
Toluene	< 1	1.	ug/l	91		80-120		
Xylene (Total)	< 1	1.	ug/l	90		80-120		

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS <u>%REC</u>	MSD %REC	MS/MSD <u>Limits</u>	<u>RPD</u>	RPD <u>MAX</u>	BKG <u>Conc</u>	DUP Conc	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: E150901AA	Sample	number(s)	: 7824790	UNSPK:	P81243	31			
t-Amyl methyl ether	99	97	65-117	2	30				
Benzene	100	99	72-134	1	30				
t-Butyl alcohol	98	99	67-119	1	30				
Ethyl t-butyl ether	100	99	74-122	1	30				
Ethylbenzene	102	100	71-134	2	30				
di-Isopropyl ether	103	102	70-129	1	30				
Methyl Tertiary Butyl Ether	99	99	72-126	0	30				
Toluene	102	98	80-125	4	30				
Xylene (Total)	101	99	79-125	2	30				

### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX + 5 Oxys Batch number: E150901AA

	IIDEI. EIJUJUIAA			
	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7824790	98	104	96	96

### \*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

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### Quality Control Summary

Client Name: Kleinfelder Group Number: 1548950

Reported: 04/01/2015 10:14

### Surrogate Quality Control

				- <u> </u>	
Blank	98	104	96	96	
LCS	97	102	96	96	
MS	98	101	96	97	
MSD	97	101	96	97	
Limits:	80-116	77-113	80-113	78-113	

<sup>\*-</sup> Outside of specification

<sup>(1)</sup> The result for one or both determinations was less than five times the LOQ.

<sup>(2)</sup> The unspiked result was more than four times the spike added.



### Analysis Request/Environmental Services Chain of Custody

For Lancaster Laboratories use only Acct. #: 12152
Group #: \_\_\_\_\_ Sample #: \_\_\_\_\_
1548950 7824790

Client: Fairfax Petrole	eum	Acct. #:					Matrix						Anal	yses Re	equeste	ed			For Lab	Use C	<b>Only</b>
Project Name/#: G	ireat Falls	PWSID#:											Pres	ervatio	n Code	s			FSC:		
Project Manager: M	lark C. Steele	P.O. #:	51141-3047	775			ble ES			Z.	/								SCR#:		
Sampler: Fin So	Jueil	Quote #:				L	Potable NPDES			\$									Preservation Code		
Name of State where samp	oles were collected:	Virginia							ners	O)									H=HCI T=Thios N=HNO3 B=NaOI S=H2SO4 O=Other	н 📗	eceipt
Sample Identification		Date Collected		Grab	Composite	Soil	Water	Other	Total # of Containers	BTEX/ <del>MTBE</del> (8260) + Oqyqeve	\$								Remarks	S	Temperature of samples upon rı (if requested)
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Data Package Options (ple			SDG Comp	lete?			Rel	inqu	ished	l by:			Date		Time		Received	l\by:	D	ate -	Time
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Type II (Tier II) M	IA MCP CT RCP						Rel	nqu	ished	l by:			Date		Time		Received	l by:		ate	Time
Type III (Reduced NJ)	State-specif	ic QC (MS/N	ISD/Dup)? `	⁄es	N	10															
Type IV (CLP SOW)	■* *	d QC sample an		ite volu	ıme)		Rel	nqu	ished	l by:		`	Date		Time		Received	l by:	P		Time
Гуре VI (Raw Data Only)	Internal CO	C required?	Yes No														por	1		3/27/8	1736

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## **Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
μg	microgram(s)	mg	milligram(s)
mĹ	milliliter(s)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

< less than

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an

as-received basis.

### Laboratory Data Qualifiers:

B - Analyte detected in the blank

C - Result confirmed by reanalysis

E - Concentration exceeds the calibration range

J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and the < Limit of Quantitation (LOQ or RL)

P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.

U - Analyte was not detected at the value indicated

V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

## Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.



## **APPENDIX B**

Lancaster Laboratories Analysis Reports – SVE System

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### ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 Kleinfelder 550 West C Street, Suite 1200 San Diego CA 92101

February 23, 2015

Project: Fairfax 26140

Submittal Date: 02/12/2015 Group Number: 1538184 PO Number: 51141-304775 State of Sample Origin: VA

Client Sample Description
Blower Effluent Grab Air

Lancaster Labs (LL) #

7770304

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <a href="http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/">http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/</a>.

ELECTRONIC	Kleinfelder	Attn: Mark Steele
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ELECTRONIC	Kleinfelder	Attn: Venelda Williams
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ELECTRONIC	Kleinfelder	Attn: Jennifer Kozak
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ELECTRONIC	Kleinfelder	Attn: Nathan Stevens
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ELECTRONIC	Kleinfelder	Attn: Paxton Wertz
COPY TO		

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Respectfully Submitted,

Amek Carter Specialist

(717) 556-7252



# Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: Blower Effluent Grab Air

Great Falls, VA SummaCan# 833

Blower Effluent

LL Sample # AQ 7770304

LL Group # 1538184 Account # 12152

Project Name: Fairfax 26140

Collected: 02/11/2015 09:30 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 02/12/2015 15:40 Reported: 02/23/2015 11:33

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
Volat	iles in Air EPA TO-15		mg/m3	mg/m3	
05298	Benzene	71-43-2	< 0.0032	0.0032	1
05298	Ethylbenzene	100-41-4	< 0.0043	0.0043	1
05298	Methyl t-Butyl Ether	1634-04-4	0.10	0.036	10
05298	Toluene	108-88-3	< 0.0038	0.0038	1
05298	m/p-Xylene	179601-23-1	0.022	0.0043	1
05298	o-Xylene	95-47-6	0.017	0.0043	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO-15 BTEX, MTBE	EPA TO-15	1	D1505030AA	02/19/2015 21:59	Michael A Ziegler	1
05298	TO-15 BTEX, MTBE	EPA TO-15	1	D1505030AA	02/20/2015 11:04	Michael A Ziegler	10

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### Quality Control Summary

Client Name: Kleinfelder Group Number: 1538184

Reported: 02/23/15 at 11:33 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank <u>LOO</u>	Report <u>Units</u>	LCS <u>%REC</u>	LCSD <u>%REC</u>	LCS/LCSD <u>Limits</u>	RPD	RPD <u>Max</u>
Batch number: D1505030AA	Sample numl	ber(s): 77	70304					
Benzene	< 0.0032	0.0032	mg/m3	86	89	70-130	3	25
Ethylbenzene	< 0.0043	0.0043	mg/m3	91	95	70-130	4	25
Methyl t-Butyl Ether	< 0.0036	0.0036	mg/m3	87	95	52-129	9	25
Toluene	< 0.0038	0.0038	mg/m3	88	91	70-130	3	25
m/p-Xylene	< 0.0043	0.0043	mg/m3	90	94	70-130	4	25
o-Xylene	< 0.0043	0.0043	mg/m3	97	102	70-130	5	25

<sup>\*-</sup> Outside of specification

<sup>(1)</sup> The result for one or both determinations was less than five times the LOQ.

<sup>(2)</sup> The unspiked result was more than four times the spike added.





For Lancaster Lat Group #:

boratories use only Acct. #: 12152	(1)
Sample #: <u>¬¬¬оЗсЧ</u>	/()
238184	

Client: Fairfax Petr	oleum	Acct. #:	t. #:			Matrix	trix Analyses Requested							For Lab	Use (	Only					
Project Name/#:	Great Falls	PWSID #:								6	(3)		Pres	servatio	n Code	s			FSC: _		
Project Manager:	Mark C. Steele	P.O. #:	51141 - 30	747	75		ble ES			*	/ ×								SCR#:		
Sampler: Tm 39	Just 11	Quote #:					Potable NPDES												Preservation Cod		
Name of State where sa	mples were collec	ted: Virginia							iners	)-15)								<u> </u>	H=HCI T=Thi N=HNO3 B=Na S=H2SO4 O=Oth		receipt
Sample Identification		Date Collected		_	Composite	Soil	Water	Other ~ N.C	Total # of Containers	BTEX, MTBE (TO-15)	·			-					Remark		Temperature of samples upon (if requested)
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Phone #:	Fax								ished				Date		Time		Réceived	by:	T	Date	Time
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Data Package Options	(plages sirely if require	d)	SDG Comp	lete'	2	-	Rel	inqu	ished	by:			Date		Time		Received	by:	<b>★</b>	Date	Time
Type I (validation/NJ reg)		u)	Yes N		•														/	:	
Type II (Tier II)	MA MCP CT F	RCD.	163 1				Rel	ingu	ished	by:			Date		Time		Received	by:	1	Date	Time
		te-specific QC (MS/	MCD/Dup\2	Von		No		•		•											
Type III (Reduced NJ)		•					Rel	inau	ished	bv:			Date		Time		Received	by:	2 1	Date	Time
Type IV (CLP SOW)	<b>1</b> ' '	s, indicated QC sample a rnal COC required?		ale VO	iume)						Children of the Control of the Contr					_	8	2	_   <mark></mark>	12/15	1540
Type VI (Raw Data Only)	inte	Lancaster Labor		2425	Nev	v Hol	land Pik	e Pí	) Bo	x 12425	Lancas	ster PA	17605-	2425 7	1 17-656-	2300		eve T	\ (		, , ,
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Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client



## **Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
μg	microgram(s)	mg	milligram(s)
mĹ	milliliter(s)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

less than <

greater than >

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Results printed under this heading have been adjusted for moisture content. This increases the analyte weight Dry weight basis

concentration to approximate the value present in a similar sample without moisture. All other results are reported on an

as-received basis.

### Laboratory Data Qualifiers:

B - Analyte detected in the blank

C - Result confirmed by reanalysis

E - Concentration exceeds the calibration range

J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and the < Limit of Quantitation (LOQ or RL)

P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.

U - Analyte was not detected at the value indicated

V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

### Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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### ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 Kleinfelder 550 West C Street, Suite 1200 San Diego CA 92101

April 02, 2015

**Project: Fairfax 26140** 

Submittal Date: 03/18/2015 Group Number: 1546219 PO Number: 51141-304775 State of Sample Origin: VA

Client Sample Description
Blower Effluent Grab Air

Lancaster Labs (LL) #

7810148

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <a href="http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/">http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/</a>.

**ELECTRONIC** Kleinfelder Attn: Paxton Wertz COPY TO Kleinfelder **ELECTRONIC** Attn: Nathan Stevens COPY TO **ELECTRONIC** Kleinfelder Attn: Jennifer Kozak COPY TO **ELECTRONIC** Kleinfelder Attn: Venelda Williams COPY TO **ELECTRONIC** Kleinfelder Attn: Mark Steele COPY TO

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Respectfully Submitted,

Amek Carter Specialist

(717) 556-7252



# Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: Blower Effluent Grab Air

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # AQ 7810148 LL Group # 1546219

Account # 12152

Project Name: Fairfax 26140

Collected: 03/17/2015 11:45 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/18/2015 17:30 Reported: 04/02/2015 13:14

CAT No.	Analysis Name		CAS Number	Final Result	LOQ	Final Result	LOQ	DF
Volat	iles in Air	EPA 18 mod	/EPA 25 mod	mg/m3	mg/m3	ppm(v)	ppm(v)	
07090	C1-C4 Hydrocarbons a	as propane	n.a.	< 18	18	< 10	10	1
07090 The	>C4-C10 Hydrocarbons holding time was not		n.a.	< 35	35	< 10	10	1
Volat	iles in Air	EPA TO-15		mg/m3	mg/m3	ppm(v)	ppm(v)	
05265	Benzene		71-43-2	0.0040	0.0032	0.0013	0.0010	1
05265	Ethylbenzene		100-41-4	0.0076	0.0043	0.0017	0.0010	1
05265	Methyl t-Butyl Et	her	1634-04-4	0.065	0.018	0.018	0.0050	5
05265	Toluene		108-88-3	0.018	0.0038	0.0049	0.0010	1
05265	m/p-Xylene		179601-23-1	0.016	0.0043	0.0037	0.0010	1
05265	o-Xylene		95-47-6	< 0.0043	0.0043	< 0.0010	0.0010	1

This sample was analyzed outside of the suggested 5 day holding time. EPA Method TO-15 does not specify a holding time for tedlar bags.

LOQ = Limit of Quantitation

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

#### Laboratory Sample Analysis Record Method Trial# Batch# CAT Analysis Name Analysis Analyst Dilution No. Date and Time Factor 07090 C1-C4, >C4-C10 (as EPA 18 mod/EPA 25 M1508530AA 03/26/2015 22:39 Chin F Ly mod propane) 05265 BTEX & MTBE (Tedlar) List EPA TO-15 D1509030AA 03/31/2015 21:47 Jeffrey B Smith 1 05265 BTEX & MTBE (Tedlar) List EPA TO-15 D1509030AA 04/01/2015 09:58 Jeffrey B Smith 5

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### Quality Control Summary

Client Name: Kleinfelder Group Number: 1546219

Reported: 04/02/2015 13:14

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank <u>LOO</u>	Report <u>Units</u>	LCS <u>%REC</u>	LCSD <u>%REC</u>	LCS/LCSD <u>Limits</u>	RPD	RPD <u>Max</u>
Batch number: D1509030AA	Sample numbe	er(s): 781	.0148					
Benzene	< 0.0032	0.0032	mg/m3	84	90	70-130	7	25
Ethylbenzene	< 0.0043	0.0043	mg/m3	90	95	70-130	5	25
Methyl t-Butyl Ether	< 0.0036	0.0036	mg/m3	96	92	52-129	5	25
Toluene	< 0.0038	0.0038	mg/m3	85	91	70-130	6	25
m/p-Xylene	< 0.0043	0.0043	mg/m3	93	97	70-130	5	25
o-Xylene	< 0.0043	0.0043	mg/m3	99	104	70-130	5	25
Batch number: M1508530AA	Sample numbe	er(s): 781	.0148					
C1-C4 Hydrocarbons as propane	< 18	18.	mg/m3					
>C4-C10 Hydrocarbons hexane	< 35	35.	mg/m3					

<sup>\*-</sup> Outside of specification

<sup>(1)</sup> The result for one or both determinations was less than five times the LOQ.

<sup>(2)</sup> The unspiked result was more than four times the spike added.





For Lancaste Group

r Labora	tories use only	Acct. #: 12152	6
p #:	Sample #:	7810148	/ i/
1540	0219		

Client: Fairfax Pe	etroleum	Acct. #:			T		Matrix			Analyses Requested								For Lab	Use (	Only	
Project Name/#:	Great Falls	PWSID #:											Pres	servatio	on Code	s			FSC:		
Project Manager:	Mark C. Steele	P.O. #:	51141- 30	477.	5		B ES			X	/ ×	/							SCR#:		
Sampler:	- Bosarel	Quote #:			4	ŀ	Potable NPDES		s	5)									Preservation Code H=HCl T=Thio N=HNO3 B=NaC	sulfate	
Name of State where s	samples were colle	ected: Virginia							iner	725) 0-1	5)	(6							S=H2SO4 O=Othe		receipt
Sample Identification	1	Date Collected		Grab	Composite	Soil	Water	Other - Aiっ	Total # of Containers	BTEX, MTBE <del>(18/25)</del> (TO-1	TPH C1-C4 (18/25)	TPH C5-C10 (18/25)							Remark	s	Temperature of samples upon ( (if requested)
Blowe	er Effluent	3/17/13	1145	Х	_			Х	1	Х	Х	Х							1		
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Turnaround Time Red	quested (TAT) (ple	ease circle): (Normal R	ush				Rel	inqui	shed	by:			Date		Time		Received	by:	- 1	Date	
(Rush TAT is subject to Lanc	aster Laboratories appr	oval and surcharge.)					1	_	_ <		- 1		3/17	115	14	<u>دن</u>	Received	500	<u>&gt;n (</u>	40/1	51400
Date results are neede	ed:						Rel	inqui			2		Date		Time		Received	by:	1.	Date	
Rush results requested	d by (please circle)	): Phone Fax	<b>E</b> -mail	)						ler i	100	~	3/13	77) -	14, 6	Ò	tr				14,4
Phone #:	Fa	ax #:					Rel	inqui ارا	shed	l by:		2	Date		Time		Received	by:	-	Date	Time
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Data Package Option		ired)	SDG Comp				Rei	inqui	snec	ı by:			Date		Time		Received	by.	ا	/ale	i ii iie
Type I (validation/NJ reg			Yes No	0			Pol	inqui	choo	l by:			Date		Time		Received	hv	<del> </del> -	Date	Time
Type II (Tier II)		RCP					Rei	inqui	SHEC	ı by. \			Dale		1 11116		, veceived	by.	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		
Type III (Reduced NJ)	<b>I</b>	ate-specific QC (MS/N			N	10	Rel	inqui	sher	l hv:	<del>\</del>		Date		Time		Received	bv.	<del></del>	Date	Time
Type IV (CLP SOW)		yes, indicated QC sample an		ite volur	ne)		176	ııquı	31166	ı ⊌y.		_	Date				IN	11	1		1730
Type VI (Raw Data Only	') ini	ternal COC required?	res INO										<u> </u>		<u> </u>		1201	0		.0/10	1,00

Lancaster Laboratories, Inc. 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 717-656-2300

Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client



## **Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
μg	microgram(s)	mg	milligram(s)
mĹ	milliliter(s)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

less than <

greater than >

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Results printed under this heading have been adjusted for moisture content. This increases the analyte weight Dry weight basis

concentration to approximate the value present in a similar sample without moisture. All other results are reported on an

as-received basis.

### Laboratory Data Qualifiers:

B - Analyte detected in the blank

C - Result confirmed by reanalysis

E - Concentration exceeds the calibration range

J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and the < Limit of Quantitation (LOQ or RL)

P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.

U - Analyte was not detected at the value indicated

V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

### Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.



### **APPENDIX C**

Lancaster Laboratories Analysis Reports – Groundwater Recovery System

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### ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 Kleinfelder 550 West C Street, Suite 1200 San Diego CA 92101

January 13, 2015

Project: Fairfax 26140

Submittal Date: 01/09/2015 Group Number: 1530247 PO Number: 51141-304286 State of Sample Origin: VA

Client Sample Description

Lancaster Labs (LL) #

7734892

LGAC 5 Effluent Grab Water

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <a href="http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/">http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/</a>.

**ELECTRONIC** Kleinfelder Attn: Mark Steele COPY TO Kleinfelder **ELECTRONIC** Attn: Venelda Williams COPY TO **ELECTRONIC** Kleinfelder Attn: Jennifer Kozak COPY TO **ELECTRONIC** Kleinfelder Attn: Nathan Stevens COPY TO **ELECTRONIC** Kleinfelder Attn: Paxton Wertz COPY TO

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Respectfully Submitted,

Amek Carter Specialist

(717) 556-7252



## Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: LGAC 5 Effluent Grab Water

Fairfax Petroleum 26140

LL Sample # WW 7734892 LL Group # 1530247 Account # 12152

Project Name: Fairfax 26140

Collected: 01/05/2015 15:45 by CL Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 01/09/2015 16:28 Reported: 01/13/2015 19:17

### LGAC5

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10335	Benzene	71-43-2	< 1	1	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	< 1	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335	Chloroform	67-66-3	< 1	1	1
10335	1,2-Dichlorobenzene	95-50-1	< 5	5	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	Methyl Tertiary Butyl	1634-04-4	11	1	1
	Ether				
10335	Methylene Chloride	75-09-2	< 4	4	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Trichlorofluoromethane	75-69-4	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 VOCs	SW-846 8260B	1	T150121AA	01/12/2015 22:43	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150121AA	01/12/2015 22:43	Linda C Pape	1



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### Quality Control Summary

Client Name: Kleinfelder Group Number: 1530247

Reported: 01/13/15 at 07:17 PM

eurofins

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank <u>LOO</u>	Report <u>Units</u>	LCS %REC	LCSD %REC	LCS/LCSD <u>Limits</u>	RPD	RPD <u>Max</u>
Batch number: T150121AA	Sample numb	ber(s): 77	34892					
Benzene	< 1	1.	ug/l	104	101	78-120	4	30
Carbon Tetrachloride	< 1	1.	ug/l	138*	130	74-130	6	30
Chlorobenzene	< 1	1.	ug/l	100	99	80-120	1	30
Chloroethane	< 1	1.	ug/l	104	108	56-120	4	30
Chloroform	< 1	1.	ug/l	122	114	80-122	7	30
1,2-Dichlorobenzene	< 5	5.	ug/l	100	98	80-120	2	30
1,1-Dichloroethane	< 1	1.	ug/l	111	107	80-120	4	30
1,2-Dichloroethane	< 1	1.	ug/l	133	123	65-135	8	30
1,1-Dichloroethene	< 1	1.	ug/l	104	97	76-124	7	30
cis-1,2-Dichloroethene	< 1	1.	ug/l	107	99	80-120	9	30
trans-1,2-Dichloroethene	< 1	1.	ug/l	103	102	80-120	2	30
Ethylbenzene	< 1	1.	ug/l	105	105	79-120	0	30
Methyl Tertiary Butyl Ether	< 1	1.	ug/l	109	107	75-120	2	30
Methylene Chloride	< 4	4.	ug/l	105	98	80-120	6	30
Tetrachloroethene	< 1	1.	ug/l	97	99	80-120	2	30
Toluene	< 1	1.	ug/l	103	105	80-120	1	30
1,1,1-Trichloroethane	< 1	1.	ug/l	121	121	66-126	0	30
1,1,2-Trichloroethane	< 1	1.	ug/l	97	97	80-120	1	30
Trichloroethene	< 1	1.	ug/l	109	106	80-120	3	30
Trichlorofluoromethane	< 1	1.	ug/l	130	123	58-135	6	30
Vinyl Chloride	< 1	1.	ug/l	116	118	63-120	2	30
Xylene (Total)	< 1	1.	ug/l	103	103	80-120	0	30

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD <u>MAX</u>	BKG Conc	DUP <u>Conc</u>	DUP RPD	Dup RPD Max
Batch number: T150121AA	Sample :	number(s)	: 7734892	UNSPK:	P73144	19			
Benzene	111	111	72-134	0	30				
Carbon Tetrachloride	134	135	75-148	0	30				
Chlorobenzene	105	110	87-124	4	30				
Chloroethane	104	104	55-130	0	30				
Chloroform	121	118	81-134	2	30				
1,2-Dichlorobenzene	104	99	84-119	5	30				
1,1-Dichloroethane	110	108	84-129	2	30				
1,2-Dichloroethane	132	130	63-142	1	30				
1,1-Dichloroethene	95	95	79-137	0	30				

- \*- Outside of specification
- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



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### Quality Control Summary

Client Name: Kleinfelder Group Number: 1530247

Reported: 01/13/15 at 07:17 PM

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

	MS	MSD	MS/MSD		RPD	BKG	DUP	DUP	Dup RPD
<u>Analysis Name</u>	%REC	%REC	<u>Limits</u>	RPD	<u>MAX</u>	Conc	Conc	RPD	<u>Max</u>
cis-1,2-Dichloroethene	102	103	80-141	1	30				
trans-1,2-Dichloroethene	100	99	86-131	2	30				
Ethylbenzene	114	116	71-134	1	30				
Methyl Tertiary Butyl Ether	95	98	72-126	2	30				
Methylene Chloride	98	95	78-133	3	30				
Tetrachloroethene	195*	203*	80-128	4	30				
Toluene	112	113	80-125	1	30				
1,1,1-Trichloroethane	126	122	69-140	3	30				
1,1,2-Trichloroethane	98	106	71-141	7	30				
Trichloroethene	138*	141*	88-133	2	30				
Trichlorofluoromethane	129	124	63-163	4	30				
Vinyl Chloride	112	111	66-133	1	30				
Xylene (Total)	108	112	79-125	3	30				

### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 8260 VOCs Batch number: T150121AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7734892	109	104	97	101
Blank	112	107	96	103
LCS	112	103	100	111
LCSD	108	102	101	108
MS	104	101	99	105
MSD	103	102	99	108
Limits:	80-116	77-113	80-113	78-113

### \*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



### Analysis Request/Environmental Services Chain of Custody

For Lancaster Laboratories use only Acct. #: 17157
Group #: \_\_\_\_\_ Sample #: \_\_\_\_\_ 31/697

Client: Fairfax Petroleum	Acct. #:					Matrix	(				Analyse	s Requested		For Lab U	se Only
Project Name/#: Great Falls	PWSID #:										Preserv	ation Codes		FSC:	•
Project Manager: Mark C. Ste	eele P.O. #:	51141- <b>3</b> 0	42	86		ES B			₹ /					SCR#:	
Sampler: Charlie Low	Quote #:			micounycone		Potable NPDES								Preservation Codes	
Name of State where samples were	collected: Virginia							Jers					-	H=HCI T≔Thiosulfa N=HNO3 B=NaOH S≃H2SO4 O=Other	te td.
Sample Identification	Date Collected		× Grab	Composite	Soil	× Water	Other	Total # of Containers	< 26140 VPDES List					Remarks	Temperature of samples upon rec (if requested)
LGAC 5 Effluent	1/5/15	1545	$\stackrel{\wedge}{\vdash}$				-	3	Х						
	7	·					<u> </u>								
							<u> </u>								
MARKET CONTRACTOR OF THE CONTR							-								
700															
					$\vdash$		-								
Turnaround Time Requested (TAT)	(please circle): Normal	lush			ш	Re	I linqu	ished	by:		Date	Time	Received by:	Date	e lTime
Rush TAT is subject to Lancaster Laboratories						C	har	lie	Low		1/6/14	0800	Sample St	lovage 1/6	14 0800
Date results are needed:						Re	linqu	ished	by:	- William I	Date	Time	Received by:	Date	
Rush results requested by (please cir	rcle): Phone Fax	<b>Ę</b> -mail	)			$\setminus$	W.	M	le		119/15	11:48	Mr Show	In 1-9-1:	1148
Phone #:	_Fax #:					Re	inqui	ished	by:		Date	Time	Received by:	Date	-3 / //
E-mail address:															
Data Package Options (please circle if r	required)	SDG Comp	lete?			Re	inqui	ished	by: 🤨	7.7.	Date	Time	Received by:	Date	Time
Type I (validation/NJ reg) TX-TRRP-1	3	Yes No	5			ı			1						
Type II (Tier II) MA MCP	CT RCP					Re	inqui	shed	by:		Date	Time	Received by.	Date	Time
Type III (Reduced NJ)	State-specific QC (MS/N	ISD/Dup)? Y	es/	١	۷o									\	
Type IV (CLP SOW)	(If yes, indicated QC sample an	d submit tripleca	te volu	ıme)		Re	inqui	shed	by:		Date	Time	Receiyed by:	Date	Time
Type VI (Raw Data Only)	Internal COC required?	Yes No											Photo	1191	15 1608

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## **Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
μg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

- < less than The number following the sign is the <u>limit of quantitation</u>, the smallest amount of analyte which can be reliably determined using this specific test.
- > greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

**Dry weight basis**Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Data Qualifiers:

C - result confirmed by reanalysis.

**J** - estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

	Organic Qualifiers		Inorganic Qualifiers
Α	TIC is a possible aldol-condensation product	В	Value is <crdl, but="" th="" ≥idl<=""></crdl,>
В	Analyte was also detected in the blank	Ε	Estimated due to interference
С	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
Ε	Concentration exceeds the calibration range of	S	Method of standard additions (MSA) used
	the instrument		for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
Р	Concentration difference between primary and	W	Post digestion spike out of control limits
	confirmation columns >25%	*	Duplicate analysis not within control limits
U	Compound was not detected	+	Correlation coefficient for MSA < 0.995
X,Y,Z	Defined in case narrative		

### Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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### ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 Kleinfelder 550 West C Street, Suite 1200 San Diego CA 92101

January 28, 2015

Project: Fairfax 26140

Submittal Date: 01/27/2015 Group Number: 1533814 PO Number: 51141-304775 State of Sample Origin: VA

Client Sample Description	<u>Lancaster Labs (LL) #</u>
Influent Grab Water	7751161
Air Stripper Effluent Grab Water	7751162
LGAC1 Effluent Grab Water	7751163
LGAC2 Effluent Grab Water	7751164
LGAC3 Effluent Grab Water	7751165

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <a href="http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/">http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/</a>.

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Respectfully Submitted,

Amek Carter Specialist

(717) 556-7252



# Analysis Report

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Sample Description: Influent Grab Water

Great Falls, VA

LL Sample # WW 7751161 LL Group # 1533814 Account # 12152

Project Name: Fairfax 26140

Collected: 01/26/2015 14:30 by PW Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 01/27/2015 10:20 Reported: 01/28/2015 12:02

GF-IN

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846 82	60B	ug/l	ug/l	
•	Acetone	67-64-1	< 200	200	10
10335	Acrolein	107-02-8	< 1,000	1,000	10
	Acrylonitrile	107-13-1	< 200	200	10
10335	t-Amyl methyl ether	994-05-8	180	10	10
10335		71-43-2	< 10	10	10
10335	Bromodichloromethane	71-43-2	< 10	10	10
10335	Bromoform	75-27-4	< 40	40	10
	Bromomethane	74-83-9	< 10	10	10
10335	2-Butanone	78-93-3	< 100	100	10
	t-Butyl alcohol	75-65-0		200	10
			2,500		
	n-Butylbenzene	104-51-8	< 50	50	10
10335	sec-Butylbenzene	135-98-8	< 50	50	10
10335		56-23-5	< 10	10	10
	Chlorobenzene	108-90-7	< 10	10	10
	Chloroethane	75-00-3	< 10	10	10
10335	2 2	110-75-8	< 100	100	10
	2-Chloroethyl vinyl ether may no preserve this sample.	t be recovered	ir acid was used to		
10335	Chloroform	67-66-3	< 10	10	10
10335	Chloromethane	74-87-3	< 10	10	10
10335	Dibromochloromethane	124-48-1	< 10	10	10
	1,2-Dichlorobenzene	95-50-1	< 50	50	10
	1,3-Dichlorobenzene	541-73-1	< 50	50	10
10335	1,4-Dichlorobenzene	106-46-7	< 50	50	10
10335	1,1-Dichloroethane	75-34-3	< 10	10	10
	1,2-Dichloroethane	107-06-2	< 10	10	10
	1,1-Dichloroethene	75-35-4	< 10	10	10
10335	cis-1,2-Dichloroethene	156-59-2	92	10	10
10335	trans-1,2-Dichloroethene	156-60-5	< 10	10	10
10335	1,2-Dichloropropane	78-87-5	< 10	10	10
	cis-1,3-Dichloropropene	10061-01-5	< 10	10	10
	trans-1,3-Dichloropropene	10061-02-6	< 10	10	10
10335		637-92-3	< 10	10	10
10335	Ethylbenzene	100-41-4	< 10	10	10
10335	di-Isopropyl ether	108-20-3	320	10	10
10335	Isopropylbenzene	98-82-8	< 50	50	10
10335	p-Isopropyltoluene	99-82-8	< 50	50	10
10335		1634-04-4		100	100
10335	Methyl Tertiary Butyl	1634-04-4	12,000	100	100
	Ether				
10335	Methylene Chloride	75-09-2	< 40	40	10
10335	Naphthalene	91-20-3	< 50	50	10
10335	n-Propylbenzene	103-65-1	< 50	50	10
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 10	10	10
10335	Tetrachloroethene	127-18-4	< 10	10	10
10335	Toluene	108-88-3	< 10	10	10
10335	1,1,1-Trichloroethane	71-55-6	< 10	10	10
10335	1,1,2-Trichloroethane	79-00-5	< 10	10	10
10335	Trichloroethene	79-01-6	< 10	10	10
10335	Trichlorofluoromethane	75-69-4	< 10	10	10
10335	1,2,4-Trimethylbenzene	95-63-6	< 50	50	10



## Analysis Report

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Sample Description: Influent Grab Water

Great Falls, VA

LL Sample # WW 7751161 LL Group # 1533814 Account # 12152

Project Name: Fairfax 26140

Collected: 01/26/2015 14:30 by PW Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 01/27/2015 10:20 San Di Reported: 01/28/2015 12:02

- , ,

GF-IN

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10335	1,3,5-Trimethylbenzene	108-67-8	< 50	50	10
10335	Vinyl Chloride	75-01-4	< 10	10	10
10335	Xylene (Total)	1330-20-7	< 10	10	10

### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs 8260 Kleinfelder	SW-846 8260B	1	N150272AA	01/28/2015 01:21	Amanda K Richards	10
	Full						
10335	VOCs 8260 Kleinfelder	SW-846 8260B	1	N150272AA	01/28/2015 01:45	Amanda K Richards	100
	Full						
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N150272AA	01/28/2015 01:21	Amanda K Richards	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	N150272AA	01/28/2015 01:45	Amanda K Richards	100



# **Analysis Report**

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Sample Description: Air Stripper Effluent Grab Water

Great Falls, VA

LL Sample # WW 7751162 LL Group # 1533814 Account # 12152

Project Name: Fairfax 26140

Collected: 01/26/2015 14:35 by PW Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 01/27/2015 10:20 Reported: 01/28/2015 12:02

GF-AS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846 826	0B	ug/l	ug/l	
10335	Acetone	67-64-1	< 20	20	1
10335	Acrolein	107-02-8	< 100	100	1
10335	Acrylonitrile	107-13-1	< 20	20	1
10335	t-Amyl methyl ether	994-05-8	13	1	1
10335		71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335		75-25-2	< 4	4	1
10335		74-83-9	< 1	1	1
10335	2-Butanone	78-93-3	< 10	10	1
10335		75-65-0	2,600	200	10
10335	2	104-51-8	< 5	5	1
10335	sec-Butylbenzene	135-98-8	< 5	5	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	< 1	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335		110-75-8	< 10	10	1
10333	2-Chloroethyl vinyl ether may not			10	_
	preserve this sample.	be recovered	II aciu was useu to		
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335		124-48-1	< 1	1	1
10335	1,2-Dichlorobenzene	95-50-1	< 5	5	1
10335		541-73-1	< 5	5	1
10335	1,4-Dichlorobenzene	106-46-7	< 5	5	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	·	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	1,2-Dichloropropane	78-87-5	< 1	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	< 1	1	1
10335	Ethyl t-butyl ether	637-92-3	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	di-Isopropyl ether	108-20-3	7	1	1
10335	Isopropylbenzene	98-82-8	< 5	5	1
10335	p-Isopropyltoluene	99-87-6	< 5	5	1
10335	Methyl Tertiary Butyl	1634-04-4	990	10	10
	Ether				
10335	Methylene Chloride	75-09-2	< 4	4	1
10335	Naphthalene	91-20-3	< 5	5	1
10335	-	103-65-1	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Trichlorofluoromethane	75-69-4	< 1	1	1
10335	1,2,4-Trimethylbenzene	95-63-6	< 5	5	1
	=				



## Analysis Report

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Sample Description: Air Stripper Effluent Grab Water

Great Falls, VA

LL Sample # WW 7751162 LL Group # 1533814 Account # 12152

Project Name: Fairfax 26140

Collected: 01/26/2015 14:35 by PW Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 01/27/2015 10:20 Reported: 01/28/2015 12:02

GF-AS

CAT No.	Analysis Name CAS Number		As Received Result	As Received Limit of Quantitation	Dilution Factor	
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l		
10335	1,3,5-Trimethylbenzene	108-67-8	< 5	5	1	
10335	Vinyl Chloride	75-01-4	< 1	1	1	
10335	Xylene (Total)	1330-20-7	< 1	1	1	

### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs 8260 Kleinfelder Full	SW-846 8260B	1	N150272AA	01/28/2015 00:33	Amanda K Richards	1
10335	VOCs 8260 Kleinfelder Full	SW-846 8260B	1	N150272AA	01/28/2015 00:57	Amanda K Richards	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N150272AA	01/28/2015 00:33	Amanda K Richards	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	N150272AA	01/28/2015 00:57	Amanda K Richards	10



# **Analysis Report**

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Sample Description: LGAC1 Effluent Grab Water

Great Falls, VA

LL Sample # WW 7751163 LL Group # 1533814 Account # 12152

Project Name: Fairfax 26140

Collected: 01/26/2015 14:40 by PW Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 01/27/2015 10:20 Reported: 01/28/2015 12:02

GF-C1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846 8	260B	ug/l	ug/l	
	Acetone	67-64-1	< 20	20	1
10335	Acrolein	107-02-8	< 100	100	1
10335	Acrylonitrile	107-13-1	< 20	20	1
	t-Amyl methyl ether	994-05-8	< 1	1	1
10335	Benzene	71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335	Bromoform	75-25-2	< 4	4	1
10335	Bromomethane	74-83-9	< 1	1	1
10335	2-Butanone	78-93-3	< 10	10	1
	t-Butyl alcohol	75-65-0	1,400	20	1
10335	n-Butylbenzene	104-51-8	< 5	5	1
10335	sec-Butylbenzene	135-98-8	< 5	5	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	< 1	1	1
10335		75-00-3	< 1	1 10	1 1
10335	1 1	110-75-8	< 10	10	T
	2-Chloroethyl vinyl ether may preserve this sample.	not be recovered	ii acid was used to		
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335	Dibromochloromethane	124-48-1	< 1	1	1
10335	1,2-Dichlorobenzene	95-50-1	< 5	5	1
10335	1,3-Dichlorobenzene	541-73-1	< 5	5	1
10335	1,4-Dichlorobenzene	106-46-7	< 5	5	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
	trans-1,2-Dichloroethene	156-60-5	< 1	1	1 1
	1,2-Dichloropropane	78-87-5	< 1 < 1	1	1
	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
10335	trans-1,3-Dichloropropene Ethyl t-butyl ether	10061-02-6 637-92-3	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	-	108-20-3	2	1	1
	di-Isopropyl ether			5	1
10335	Isopropylbenzene	98-82-8	< 5	5	1
10335 10335	p-Isopropyltoluene	99-87-6 1634-04-4	< 5	1	1
10333	Methyl Tertiary Butyl	1034-04-4	130	1	ı
	Ether				
10335	Methylene Chloride	75-09-2	< 4	4	1
10335	Naphthalene	91-20-3	< 5	5	1
10335	n-Propylbenzene	103-65-1	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1 1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335 10335	1,1,2-Trichloroethane Trichloroethene	79-00-5 79-01-6	< 1 < 1	1	1
10335	Trichlorofluoromethane	75-69-4	< 1	1	1
10335	1,2,4-Trimethylbenzene	95-63-6	< 5	5	1
10335	1,3,5-Trimethylbenzene	108-67-8	< 5	5	1
10000	_, _,	_ 0 0 0 0 0	· <del>-</del>	-	_



# **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: LGAC1 Effluent Grab Water

Great Falls, VA

LL Sample # WW 7751163 LL Group # 1533814 Account # 12152

Project Name: Fairfax 26140

Collected: 01/26/2015 14:40 by PW Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 01/27/2015 10:20 Reported: 01/28/2015 12:02

GF-C1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs 8260 Kleinfelder Full	SW-846 8260B	1	N150272AA	01/28/2015 00:08	Amanda K Richards	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N150272AA	01/28/2015 00:08	Amanda K Richards	1



# **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: LGAC2 Effluent Grab Water

Great Falls, VA

LL Sample # WW 7751164 LL Group # 1533814 Account # 12152

Project Name: Fairfax 26140

Collected: 01/26/2015 14:45 by PW Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 01/27/2015 10:20 Reported: 01/28/2015 12:02

GF-C2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10335	Acetone	67-64-1	< 20	20	1
10335	Acrolein	107-02-8	< 100	100	1
10335	Acrylonitrile	107-13-1	< 20	20	1
10335	t-Amyl methyl ether	994-05-8	< 1	1	1
10335	Benzene	71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335	Bromoform	75-25-2	< 4	4	1
10335	Bromomethane	74-83-9	< 1	1	1
10335	2-Butanone	78-93-3	< 10	10	1
10335	t-Butyl alcohol	75-65-0	65	20	1
10335	n-Butylbenzene	104-51-8	< 5	5	1
10335	sec-Butylbenzene	135-98-8	< 5	5	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	< 1	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335	2-Chloroethyl Vinyl Ether	110-75-8	< 10	10	1
	2-Chloroethyl vinyl ether may preserve this sample.	not be recovered	if acid was used to		
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335	Dibromochloromethane	124-48-1	< 1	1	1
10335	1,2-Dichlorobenzene	95-50-1	< 5	5	1
10335	1,3-Dichlorobenzene	541-73-1	< 5	5	1
10335	1,4-Dichlorobenzene	106-46-7	< 5	5	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
	1,2-Dichloropropane	78-87-5	< 1	1	1
	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
	trans-1,3-Dichloropropene	10061-02-6	< 1	1	1
10335	Ethyl t-butyl ether	637-92-3	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	di-Isopropyl ether	108-20-3	< 1	1	1
10335	Isopropylbenzene	98-82-8	< 5	5	1
10335	p-Isopropyltoluene	99-87-6	< 5	5	1
10335	Methyl Tertiary Butyl	1634-04-4	110	1	1
	Ether				
10335	Methylene Chloride	75-09-2	< 4	4	1
10335	Naphthalene	91-20-3	< 5	5	1
10335	n-Propylbenzene	103-65-1	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Trichlorofluoromethane	75-69-4	< 1	1	1
10335	1,2,4-Trimethylbenzene	95-63-6	< 5	5	1
10335	1,3,5-Trimethylbenzene	108-67-8	< 5	5	1



# **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: LGAC2 Effluent Grab Water

Great Falls, VA

LL Sample # WW 7751164 LL Group # 1533814 Account # 12152

Project Name: Fairfax 26140

Collected: 01/26/2015 14:45 by PW Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 01/27/2015 10:20 Reported: 01/28/2015 12:02

GF-C2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs 8260 Kleinfelder Full	SW-846 8260B	1	N150272AA	01/27/2015 23:44	Amanda K Richards	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N150272AA	01/27/2015 23:44	Amanda K Richards	1



# **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: LGAC3 Effluent Grab Water

Great Falls, VA

LL Sample # WW 7751165 LL Group # 1533814 Account # 12152

Project Name: Fairfax 26140

Collected: 01/26/2015 14:50 by PW Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 01/27/2015 10:20 Reported: 01/28/2015 12:02

GF-C3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846 8	3260B	ug/l	ug/l	
10335	Acetone	67-64-1	< 20	20	1
10335	Acrolein	107-02-8	< 100	100	1
	Acrylonitrile	107-13-1	< 20	20	1
10335	t-Amyl methyl ether	994-05-8	< 1	1	1
10335	Benzene	71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335	Bromoform	75-25-2	< 4	4	1
10335	Bromomethane	74-83-9	< 1	1	1
10335		78-93-3	< 10	10	1
	t-Butyl alcohol	75-65-0	< 20	20	1
	n-Butylbenzene	104-51-8	< 5	5	1
10335	-	135-98-8	< 5	5	1
	2			1	1
10335 10335	Chlorobenzene	56-23-5 108-90-7	< 1 < 1	1	1
			< 1		
	Chloroethane	75-00-3	· =	1	1
10335	2 2	110-75-8	< 10	10	1
	2-Chloroethyl vinyl ether may preserve this sample.	not be recovered	if acid was used to		
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335	Dibromochloromethane	124-48-1	< 1	1	1
10335	1,2-Dichlorobenzene	95-50-1	< 5	5	1
10335	1,3-Dichlorobenzene	541-73-1	< 5	5	1
10335	1,4-Dichlorobenzene	106-46-7	< 5	5	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	1,2-Dichloropropane	78-87-5	< 1	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	< 1	1	1
10335	Ethyl t-butyl ether	637-92-3	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	di-Isopropyl ether	108-20-3	< 1	1	1
10335	Isopropylbenzene	98-82-8	< 5	5	1
10335	p-Isopropyltoluene	99-87-6	< 5	5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	< 1	1	1
10335	Methylene Chloride	75-09-2	< 4	4	1
10335	Naphthalene	91-20-3	< 5	5	1
10335	n-Propylbenzene	103-65-1	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335		108-88-3	< 1	1	1
10335		71-55-6	< 1	1	1
	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335		79-01-6	< 1	1	1
10335		75-69-4	< 1	1	1
10335	1,2,4-Trimethylbenzene	95-63-6	< 5	5	1
	1,3,5-Trimethylbenzene	108-67-8	< 5	5	1
10335	Vinyl Chloride	75-01-4	< 1	1	1



# **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: LGAC3 Effluent Grab Water

Great Falls, VA

LL Sample # WW 7751165 LL Group # 1533814 Account # 12152

Project Name: Fairfax 26140

Collected: 01/26/2015 14:50 by PW

Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 01/27/2015 10:20 Reported: 01/28/2015 12:02

GF-C3

CAT Analysis Name CAS Number Result Quantitation Factor

GC/MS Volatiles SW-846 8260B ug/l ug/l

10335 Xylene (Total) 1330-20-7 < 1 1

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs 8260 Kleinfelder	SW-846 8260B	1	N150272AA	01/27/2015 23:20	Amanda K Richards	1
01163	Full GC/MS VOA Water Prep	SW-846 5030B	1	N150272AA	01/27/2015 23:20	Amanda K Richards	1



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### Quality Control Summary

Client Name: Kleinfelder Group Number: 1533814

Reported: 01/28/15 at 12:02 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank LOO	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Analysis Name	Kesuic	<u>100</u>	UIIICB	SKEC	SKEC	<u>HIMIT CS</u>	KFD	Max
Batch number: N150272AA		mber(s): 77						
Acetone	< 20	20.	ug/l	93	93	55-129	0	30
Acrolein	< 100	100.	ug/l	95	92	59-120	3	30
Acrylonitrile	< 20	20.	ug/l	98	97	62-120	0	30
t-Amyl methyl ether	< 1	1.	ug/l	100	101	75-120	1	30
Benzene	< 1	1.	ug/l	102	100	78-120	1	30
Bromodichloromethane	< 1	1.	ug/l	95	95	73-120	0	30
Bromoform	< 4	4.	ug/l	90	89	61-120	1	30
Bromomethane	< 1	1.	ug/l	95	96	53-130	0	30
2-Butanone	< 10	10.	ug/l	100	102	54-133	1	30
t-Butyl alcohol	< 20	20.	ug/l	104	102	75-120	2	30
n-Butylbenzene	< 5	5.	ug/l	99	98	68-120	1	30
sec-Butylbenzene	< 5	5.	uq/l	100	101	75-120	1	30
Carbon Tetrachloride	< 1	1.	ug/l	99	98	74-130	1	30
Chlorobenzene	< 1	1.	ug/l	101	100	80-120	1	30
Chloroethane	< 1	1.	ug/l	94	91	56-120	4	30
2-Chloroethyl Vinyl Ether	< 10	10.	ug/l	97	98	62-128	0	30
Chloroform	< 1	1.	ug/l	101	100	80-122	1	30
Chloromethane	< 1	1.	uq/l	99	99	63-120	0	3.0
Dibromochloromethane	< 1	1.	uq/l	98	98	72-120	í	30
1,2-Dichlorobenzene	< 5	5.	ug/l	99	99	80-120	0	30
1,3-Dichlorobenzene	< 5	5.	uq/l	100	99	80-120	0	30
1,4-Dichlorobenzene	< 5	5.	ug/1	100	100	80-120	0	30
1,1-Dichloroethane	< 1	1.	ug/1	99	98	80-120	1	30
1,2-Dichloroethane	< 1	1.	ug/l	99	98	65-135	1	30
1,1-Dichloroethene	< 1	1.	ug/1	100	100	76-124	1	30
cis-1,2-Dichloroethene	< 1	1.	ug/l	104	102	80-120	2	30
trans-1,2-Dichloroethene	< 1	1.	ug/1	104	105	80-120	1	30
1,2-Dichloropropane	< 1	1.	ug/1 ug/1	102	100	80-120	2	30
cis-1,3-Dichloropropene	< 1	1.	ug/1 ug/1	102	101	80-120	2	30
trans-1,3-Dichloropropene	< 1	1.	ug/1 ug/1	102	100	76-120	1	30
Ethyl t-butyl ether	< 1	1.	ug/1 ug/1	102	100	69-120	2	30
Ethylbenzene	< 1	1.	ug/1 ug/l	100	102	79-120	1	30
	< 1	1.				61-132	1	30
di-Isopropyl ether	< 5	1. 5.	ug/l	104	103		0	30
Isopropylbenzene			ug/l	102	101	80-120	-	
p-Isopropyltoluene	< 5	5.	ug/l	100	100	76-120	0	30
Methyl Tertiary Butyl Ether	< 1	1.	ug/l	99	99	75-120	0	30
Methylene Chloride	< 4	4.	ug/l	98	97	80-120	1	30
Naphthalene	< 5	5.	ug/l	94	98	47-126	3	30
n-Propylbenzene	< 5	5.	ug/l	102	101	80-120	1	30
1,1,2,2-Tetrachloroethane	< 1	1.	ug/l	99	99	70-120	1	30
Tetrachloroethene	< 1	1.	ug/l	101	99	80-120	2	30
Toluene	< 1	1.	ug/l	103	100	80-120	2	30
1,1,1-Trichloroethane	< 1	1.	ug/l	97	96	66-126	1	30

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



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## Quality Control Summary

Client Name: Kleinfelder Group Number: 1533814

Reported: 01/28/15 at 12:02 PM

	Blank	Blank	Report	LCS	LCSD	LCS/LCSD		RPD
<u>Analysis Name</u>	Result	LOO	Units	%REC	%REC	<u>Limits</u>	RPD	<u>Max</u>
1,1,2-Trichloroethane	< 1	1.	ug/l	101	101	80-120	0	30
Trichloroethene	< 1	1.	ug/l	104	102	80-120	1	30
Trichlorofluoromethane	< 1	1.	ug/l	97	95	58-135	2	30
1,2,4-Trimethylbenzene	< 5	5.	ug/l	102	102	80-120	1	30
1,3,5-Trimethylbenzene	< 5	5.	ug/l	102	102	80-120	0	30
Vinyl Chloride	< 1	1.	ug/l	100	99	63-120	1	30
Xylene (Total)	< 1	1.	uq/l	106	105	80-120	1	30

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD <u>MAX</u>	BKG Conc	DUP Conc	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: N150272AA	Sample	number(s)	: 7751161	-77511	65 UNSE	K: P748176			
Acetone	91	93	35-144	2	30				
Acrolein	99	97	39-136	2	30				
Acrylonitrile	96	96	51-125	0	30				
t-Amyl methyl ether	97	98	65-117	1	30				
Benzene	104	104	72-134	0	30				
Bromodichloromethane	95	97	73-125	2	30				
Bromoform	91	88	48-118	3	30				
Bromomethane	97	96	47-129	0	30				
2-Butanone	100	99	44-135	2	30				
t-Butyl alcohol	105	103	67-119	2	30				
n-Butylbenzene	100	102	74-134	2	30				
sec-Butylbenzene	101	102	74-137	1	30				
Carbon Tetrachloride	101	101	75-148	0	30				
Chlorobenzene	102	101	87-124	1	30				
Chloroethane	96	95	55-130	1	30				
2-Chloroethyl Vinyl Ether	92	95	10-151	3	30				
Chloroform	104	103	81-134	1	30				
Chloromethane	98	99	61-125	1	30				
Dibromochloromethane	99	97	74-116	2	30				
1,2-Dichlorobenzene	100	101	84-119	1	30				
1,3-Dichlorobenzene	101	101	86-121	1	30				
1,4-Dichlorobenzene	100	101	85-121	0	30				
1,1-Dichloroethane	100	100	84-129	0	30				
1,2-Dichloroethane	104	102	63-142	2	30				
1,1-Dichloroethene	101	100	79-137	1	30				
cis-1,2-Dichloroethene	106	106	80-141	1	30				
trans-1,2-Dichloroethene	104	106	86-131	2	30				
1,2-Dichloropropane	101	102	83-124	0	30				
cis-1,3-Dichloropropene	100	102	70-116	2	30				
trans-1,3-Dichloropropene	100	100	74-119	0	30				
Ethyl t-butyl ether	96	98	74-122	1	30				
Ethylbenzene	105	103	71-134	2	30				
di-Isopropyl ether	102	102	70-129	0	30				
Isopropylbenzene	101	101	75-128	0	30				
p-Isopropyltoluene	99	100	76-123	2	30				
Methyl Tertiary Butyl Ether	97	99	72-126	1	30				
Methylene Chloride	102	101	78-133	0	30				

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



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### Quality Control Summary

Client Name: Kleinfelder Group Number: 1533814

Reported: 01/28/15 at 12:02 PM

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

	MS	MSD	MS/MSD		RPD	BKG	DUP	DUP	Dup RPD
Analysis Name	%REC	%REC	<u>Limits</u>	RPD	MAX	Conc	Conc	RPD	Max
Naphthalene	90	93	52-125	4	30				
n-Propylbenzene	103	103	74-134	0	30				
1,1,2,2-Tetrachloroethane	100	98	72-128	2	30				
Tetrachloroethene	102	100	80-128	2	30				
Toluene	104	104	80-125	0	30				
1,1,1-Trichloroethane	97	96	69-140	1	30				
1,1,2-Trichloroethane	102	102	71-141	0	30				
Trichloroethene	104	105	88-133	1	30				
Trichlorofluoromethane	99	98	63-163	2	30				
1,2,4-Trimethylbenzene	104	103	72-130	1	30				
1,3,5-Trimethylbenzene	103	103	65-132	0	30				
Vinyl Chloride	101	99	66-133	2	30				
Xylene (Total)	108	106	79-125	2	30				

### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs 8260 Kleinfelder Full

Batch number: N150272AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7751161	98	97	98	91
7751162	98	99	99	92
7751163	101	100	98	92
7751164	101	101	97	92
7751165	102	102	97	92
Blank	101	101	97	92
LCS	99	100	102	100
LCSD	100	101	101	100
MS	101	101	101	100
MSD	100	102	101	100
Limits:	80-116	77-113	80-113	78-113

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.





For Lancaster Lab	oratories use only Acct. #:
Group #: _	Sample #:

		12152		15.	3:	3814		7	<u> 1511</u>	61-	<u>65</u>									
Client: Fairfax Petroleum	Acct. #:		·			Matrix	7					Anal	yses R	equeste	d			For Lab Use Only		Only
Project Name/#: Great Falls	PWSID #:								Automorphism			Pres	ervatio	n Code	s			FSC:		
Project Manager: Mark C. Ste	eele P.O.#:	51141 <del>-299</del> 1				ble ES			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	/	NEW TOWNS THE WORK		XXXXX, -100 II -00 III -00 II			**************************************		SCR#:	201223952444	
Sampler: Paxton Wentz	Quote #:	`304	(77	5		Potable NPDES												Preservation Co	des	
N	- II - stardy Vinesimin							ers	6									H=HCI T=TI N=HNO3 B=N S=H2SO4 0=0		ipt
Name of State where samples were of	collected: Virginia							aine	3260									S-H2304 0-0	anor	on rece
				ite				of Containers	/OCs(										; ;	samples upo
	Date Collected	Time Collected	Grab	Composite	Soil	Water	Other	Total # of	Full List VOCs(8260)									Remar	<b>.</b>	remperature of
Sample Identification			X	S	S	<del></del>	0	_	X			ļ						Keman	\S	P E
Influent	1/26/15	1430 1435	X		$\vdash$	X			X							<u> </u>				
Air Stripper Effluent	1/26/15	1440	$\frac{\hat{x}}{x}$	-		$\frac{\lambda}{X}$			X											
LGAC1 Effluent	1/26/15	1445	$\frac{1}{x}$			$\frac{\lambda}{X}$			X		ļ									
LGAC2 Effluent	1/26/15	1450	X			$\frac{\lambda}{X}$			X								<u> </u>			
LGAC3 Effluent	1/26/15	7750	X			X			X										A	
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Turnaround Time Requested (TAT)	) (please circle): Normal	Rush				Rel	inqu	ished	by:	_//	1	Date	/	Time		Received	by: Fea	Ex	Date	Time
(Rush TAT is subject to Lancaster Laboratories						1	Ly	4	J.	P	Philippe	1/26	15	160	0	7727 14	4/3 8	890	1/2/15	1600
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Phone #:	Fax #:					Rel	inqu	ished	by:			Date		Time		Received	by:		Date	Time
E-mail address: <u>m</u>	ncsteele@kleinfelder.c	om_	-	50000 4000 TORK	and the second second															
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Type I (validation/NJ reg) TX-TRRP-1	13	Yes N	0									1								
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Type III (Reduced NJ)	State-specific QC (MS/	MSD/Dup)? \	Yes	1	Vο											,				
Type IV (CLP SOW)	(If yes, indicated QC sample a	nd submit tripleca	ate volu	ume)		Relinquished by: Date Time Received by		by:			Time									
Type VI (Raw Data Only)	Internal COC required?	Yes No	90000000000000000000000000000000000000	and a second	115005500968		************			vangue-navezae ini-iri	eligades de la companion de la		Managht to constitute on the	Commence Commence Commence		100			1.57.15	1020

Lancaster Laboratories, Inc. 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 717-656-2300 Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client



# **Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

RL N.D.	Reporting Limit none detected	BMQL MPN	Below Minimum Quantitation Level Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
μg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

less than <

greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Results printed under this heading have been adjusted for moisture content. This increases the analyte weight Dry weight basis

concentration to approximate the value present in a similar sample without moisture. All other results are reported on an

as-received basis.

#### Laboratory Data Qualifiers:

B - Analyte detected in the blank

C - Result confirmed by reanalysis

E - Concentration exceeds the calibration range

J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and the < Limit of Quantitation (LOQ or RL)

P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.

U - Analyte was not detected at the value indicated

V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

### Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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### ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601

EL ECTRONIC

Vlainfalder

Kleinfelder 550 West C Street, Suite 1200 San Diego CA 92101

Attn. Mark Staala

February 03, 2015

Project: Fairfax 26140

Submittal Date: 01/31/2015 Group Number: 1535042 PO Number: 51141-304898 State of Sample Origin: VA

Client Sample DescriptionLancaster Labs (LL) #Influent Grab Water7757055Air Stripper Effluent Grab Water7757056LGAC1 Effluent Grab Water7757057LGAC2 Effluent Grab Water7757058

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <a href="http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/">http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/</a>.

ELECTRONIC	Kleinfelder	Attn: Mark Steele
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Respectfully Submitted,

Amek Carter Specialist

(717) 556-7252



# Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: Influent Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7757055 LL Group # 1535042

Account # 12152

Project Name: Fairfax 26140

Collected: 01/30/2015 14:30 by CD Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 01/31/2015 09:40 Reported: 02/03/2015 14:17

### GFVIN

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10945	Benzene	71-43-2	< 2	2	2
10945	t-Butyl alcohol	75-65-0	720	10	2
10945	Ethylbenzene	100-41-4	< 2	2	2
10945	Methyl Tertiary Butyl	1634-04-4	3,900	20	20
	Ether				
10945	Toluene	108-88-3	< 2	2	2
10945	Xylene (Total)	1330-20-7	< 2	2	2

### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	e	Analyst	Dilution Factor
10945	BTEX/MTBE/TBA 8260	SW-846 8260B	1	F150342AA	02/03/2015 0	09:39	Anita M Dale	2
10945	BTEX/MTBE/TBA 8260	SW-846 8260B	1	F150342AA	02/03/2015 1	10:01	Anita M Dale	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150342AA	02/03/2015 0	09:39	Anita M Dale	2
01163	GC/MS VOA Water Prep	SW-846 5030B	2	F150342AA	02/03/2015 1	10.01	Anita M Dale	2.0



# **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: Air Stripper Effluent Grab Water

Great Falls, VA

Fairfax Petroleum 26140

**LL Sample # WW 7757056** 

LL Group # 1535042 Account # 12152

Project Name: Fairfax 26140

Collected: 01/30/2015 14:40 by CD Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 01/31/2015 09:40 Reported: 02/03/2015 14:17

### GFVEF

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10945	Benzene	71-43-2	< 1	1	1
10945	t-Butyl alcohol	75-65-0	600	5	1
10945	Ethylbenzene	100-41-4	< 1	1	1
10945	Methyl Tertiary Butyl	1634-04-4	220	1	1
	Ether				
10945	Toluene	108-88-3	< 1	1	1
10945	Xylene (Total)	1330-20-7	< 1	1	1

### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE/TBA 8260	SW-846 8260B	1	F150342AA	02/03/2015 10:23	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150342AA	02/03/2015 10:23	Anita M Dale	1



# **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: LGAC1 Effluent Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7757057

LL Group # 1535042 Account # 12152

Project Name: Fairfax 26140

Collected: 01/30/2015 16:10 by CD Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 01/31/2015 09:40 Reported: 02/03/2015 14:17

### GFVL1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10945	Benzene	71-43-2	< 1	1	1
10945	t-Butyl alcohol	75-65-0	45	5	1
10945	Ethylbenzene	100-41-4	< 1	1	1
10945	Methyl Tertiary Butyl	1634-04-4	85	1	1
	Ether				
10945	Toluene	108-88-3	< 1	1	1
10945	Xylene (Total)	1330-20-7	< 1	1	1

### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE/TBA 8260	SW-846 8260B	1	F150342AA	02/03/2015 10:44	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150342AA	02/03/2015 10:44	Anita M Dale	1



# Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: LGAC2 Effluent Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7757058

LL Group # 1535042 Account # 12152

Project Name: Fairfax 26140

Collected: 01/30/2015 16:00 by CD Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 01/31/2015 09:40 Reported: 02/03/2015 14:17

### GFVL2

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846	8260B	ug/l	ug/l	
10945	Benzene		71-43-2	< 1	1	1
10945	t-Butyl alcohol		75-65-0	< 5	5	1
10945	Ethylbenzene		100-41-4	< 1	1	1
10945	Methyl Tertiary D	Butyl Ether	1634-04-4	< 1	1	1
10945	Toluene		108-88-3	< 1	1	1
10945	Xylene (Total)		1330-20-7	< 1	1	1

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT	Analysis Name	Method	Trial#	Batch#	Analysis	Analyst	Dilution
No.					Date and Time		Factor
10945	BTEX/MTBE/TBA 8260	SW-846 8260B	1	F150342AA	02/03/2015 11:06	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150342AA	02/03/2015 11:06	Anita M Dale	1



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### Quality Control Summary

Client Name: Kleinfelder Group Number: 1535042

Reported: 02/03/15 at 02:17 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank <u>LOO</u>	Report <u>Units</u>	LCS %REC	LCSD %REC	LCS/LCSD <u>Limits</u>	RPD	RPD <u>Max</u>
Batch number: F150342AA	Sample numbe	er(s): 775	7055-7757	058				
Benzene	< 1	1.	ug/l	99		78-120		
t-Butyl alcohol	< 5	5.	ug/l	104		75-120		
Ethylbenzene	< 1	1.	ug/l	98		79-120		
Methyl Tertiary Butyl Ether	< 1	1.	ug/l	104		75-120		
Toluene	< 1	1.	ug/l	99		80-120		
Xylene (Total)	< 1	1.	ug/l	99		80-120		

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS <u>%REC</u>	MSD %REC	MS/MSD <u>Limits</u>	RPD	RPD <u>MAX</u>	BKG <u>Conc</u>	DUP <u>Conc</u>	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: F150342AA	Sample	number(s	): 7757055	-77570	58 UNSF	K: P750765	5		
Benzene	96	99	72-134	3	30				
t-Butyl alcohol	100	100	67-119	1	30				
Ethylbenzene	95	97	71-134	1	30				
Methyl Tertiary Butyl Ether	100	100	72-126	0	30				
Toluene	99	100	80-125	1	30				
Xylene (Total)	97	98	79-125	1	30				

#### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX/MTBE/TBA 8260

Batch number: F150342AA

	I I D O O I I I I I I			
	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7757055	100	99	100	97
7757056	98	99	101	99
7757057	97	99	101	100
7757058	101	99	99	103
Blank	98	100	99	97
LCS	97	99	101	101
MS	97	98	101	99

- \*- Outside of specification
- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



# Analysis Report

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## Quality Control Summary

Client Name: Kleinfelder Group Number: 1535042

Reported: 02/03/15 at 02:17 PM

Surrogate Quality Control

MSD 98 100 101 99 Limits: 80-116 77-113 80-113 78-113

<sup>\*-</sup> Outside of specification

<sup>(1)</sup> The result for one or both determinations was less than five times the LOQ.

<sup>(2)</sup> The unspiked result was more than four times the spike added.



## Analysis Request/Environmental Services Chain of Custody

or Lancaster Laborat	ories use only	Acct. #: <u>\\</u>	152
Group #:			
1539	5042	77570	55-56

Client: Fairfax Petroleum	Acct. #:					Matrix					Anal	yses R	equeste	d			or Lab l	Jse C	Only
Project Name/#: Great Falls	PWSID #:										Pres	ervatio	n Codes	;			FSC:		
Project Manager: Mark C. Steele	P.O. #:	51141- 3	04 B	98		ole ES			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	/							SCR#:		
Sampler: Chuck Drew StS7	Quote #:					Potable NPDES										i <b>i</b>	reservation Codes		
Name of State where samples were collected	: Virginia							ners	(0;								=HCI T=Thiosul =HNO3 B=NaOH =H2SO4 O=Other	ate	eceipt
Sample Identification	Date Collected	Time Collected		Composite	Soil	Water	Other	Total # of Containers	BTEX/MTBE (8260) + T&A							<u> </u>	Remarks		Temperature of samples upon ri (if requested)
Influent	1/30/15	1430	Х			X		3	Х										
Air Stripper Effluent	1/3:/15	1440	Х			X		3	Х										
LGAC1 Effluent	1/30/11	1610	X			Х		3	Х										
LGAC2 Effluent	1/30/15	1600	Х			X		3	Х										
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E-mail address: <u>mcsteele</u>	@kleinfelder.co	<u>m</u>	•									/							
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Lancaster Laboratories, Inc. 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 717-656-2300



# **Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
μg	microgram(s)	mg	milligram(s)
mĹ	milliliter(s)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

< less than

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an

as-received basis.

### Laboratory Data Qualifiers:

B - Analyte detected in the blank

C - Result confirmed by reanalysis

E - Concentration exceeds the calibration range

J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and the < Limit of Quantitation (LOQ or RL)

P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.

U - Analyte was not detected at the value indicated

V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

# Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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### ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 Kleinfelder 550 West C Street, Suite 1200 San Diego CA 92101

February 19, 2015

Project: Fairfax 26140

Submittal Date: 02/12/2015 Group Number: 1538164 PO Number: 51141-304775 State of Sample Origin: VA

Client Sample DescriptionLancaster Labs (LL) #Influent Grab Water7770200Air Stripper Effluent Grab Water7770201LGAC 1 Effluent Grab Water7770202LGAC 2 Effluent Grab Water7770203LGAC 3 Effluent Grab Water7770204

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <a href="http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/">http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/</a>.

ELECTRONIC	Kleinfelder	Attn: Mark Steele
COPY TO		
ELECTRONIC	Kleinfelder	Attn: Venelda Williams
COPY TO		
ELECTRONIC	Kleinfelder	Attn: Jennifer Kozak
COPY TO		
ELECTRONIC	Kleinfelder	Attn: Nathan Stevens
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ELECTRONIC	Kleinfelder	Attn: Paxton Wertz
COPY TO		

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Respectfully Submitted,

Amek Carter Specialist

(717) 556-7252



# **Analysis Report**

Account

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Sample Description: Influent Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7770200 LL Group # 1538164

# 12152

Project Name: Fairfax 26140

Collected: 02/11/2015 10:15 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 02/12/2015 15:40 Reported: 02/19/2015 17:19

GFINF

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10335	Benzene	71-43-2	< 5	5	5
10335	Carbon Tetrachloride	56-23-5	< 5	5	5
10335	Chlorobenzene	108-90-7	< 5	5	5
10335	Chloroethane	75-00-3	< 5	5	5
10335	Chloroform	67-66-3	< 5	5	5
10335	1,2-Dichlorobenzene	95-50-1	< 25	25	5
10335	1,1-Dichloroethane	75-34-3	< 5	5	5
10335	1,2-Dichloroethane	107-06-2	< 5	5	5
10335	1,1-Dichloroethene	75-35-4	< 5	5	5
10335	cis-1,2-Dichloroethene	156-59-2	110	5	5
10335	trans-1,2-Dichloroethene	156-60-5	< 5	5	5
10335	Ethylbenzene	100-41-4	< 5	5	5
10335	Methyl Tertiary Butyl	1634-04-4	5,300	50	50
	Ether				
10335	Methylene Chloride	75-09-2	< 20	20	5
10335	Tetrachloroethene	127-18-4	11	5	5
10335	Toluene	108-88-3	< 5	5	5
10335	1,1,1-Trichloroethane	71-55-6	< 5	5	5
10335	1,1,2-Trichloroethane	79-00-5	< 5	5	5
10335	Trichloroethene	79-01-6	< 5	5	5
10335	Trichlorofluoromethane	75-69-4	< 5	5	5
10335	Vinyl Chloride	75-01-4	< 5	5	5
10335	Xylene (Total)	1330-20-7	6	5	5

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record
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CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 VOCs	SW-846 8260B	1	T150481AA	02/17/2015 19:35	Linda C Pape	5
10335	8260 VOCs	SW-846 8260B	1	T150481AA	02/17/2015 19:59	Linda C Pape	50
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150481AA	02/17/2015 19:35	Linda C Pape	5
01163	GC/MS VOA Water Prep	SW-846 5030B	2	T150481AA	02/17/2015 19:59	Linda C Pape	50



# **Analysis Report**

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Sample Description: Air Stripper Effluent Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7770201

LL Group # 1538164 Account # 12152

Project Name: Fairfax 26140

Collected: 02/11/2015 10:18 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 02/12/2015 15:40 Reported: 02/19/2015 17:19

### GFEFF

Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
Volatiles SW-846	8260B	ug/l	ug/l	
Benzene	71-43-2	< 1	1	1
Ethylbenzene	100-41-4	< 1	1	1
Methyl Tertiary Butyl	1634-04-4	160	1	1
Ether				
Toluene	108-88-3	< 1	1	1
Xylene (Total)	1330-20-7	< 1	1	1
7	Volatiles SW-846 Benzene Ethylbenzene Methyl Tertiary Butyl Ether Toluene	Volatiles SW-846 8260B  Benzene 71-43-2  Ethylbenzene 100-41-4  Methyl Tertiary Butyl 1634-04-4  Ether  Toluene 108-88-3	Analysis Name         CAS Number         Result           Volatiles         SW-846         8260B         ug/1           Benzene         71-43-2         < 1	Analysis Name  CAS Number  As Received Result  Limit of Quantitation  Volatiles SW-846 8260B  ug/l  Benzene 71-43-2 < 1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs 8260 BTEX, MTBE	SW-846 8260B	1	T150481AA	02/17/2015 14:04	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150481AA	02/17/2015 14:04	Linda C Pape	1



# **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: LGAC 1 Effluent Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7770202

LL Group # 1538164 Account # 12152

Project Name: Fairfax 26140

Collected: 02/11/2015 10:22 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 02/12/2015 15:40 Reported: 02/19/2015 17:19

### GFL1E

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10335	Benzene	71-43-2	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	Methyl Tertiary Butyl	1634-04-4	1	1	1
	Ether				
10335	Toluene	108-88-3	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs 8260 BTEX, MTBE	SW-846 8260B	1	T150481AA	02/17/2015 14:28	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150481AA	02/17/2015 14:28	Linda C Pape	1



# **Analysis Report**

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Sample Description: LGAC 2 Effluent Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7770203

LL Group # 1538164 Account # 12152

Project Name: Fairfax 26140

Collected: 02/11/2015 10:28 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 02/12/2015 15:40 Reported: 02/19/2015 17:19

### GFL2E

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10335	Benzene	71-43-2	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

#### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
	VOCs 8260 BTEX, MTBE	SW-846 8260B	1	T150481AA	02/17/2015 14:52	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150481AA	02/17/2015 14:52	Linda C Pape	1



# Analysis Report

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Sample Description: LGAC 3 Effluent Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7770204

LL Group # 1538164 Account # 12152

Project Name: Fairfax 26140

Collected: 02/11/2015 10:33 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 02/12/2015 15:40 Reported: 02/19/2015 17:19

### GFL3E

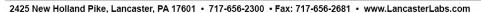
CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-84	16 8260B	ug/l	ug/l	
10335	Benzene	71-43-2	< 1	1	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	< 1	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335	Chloroform	67-66-3	< 1	1	1
10335	1,2-Dichlorobenzene	95-50-1	< 5	5	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	Methyl Tertiary Butyl	1634-04-4	2	1	1
	Ether				
10335	Methylene Chloride	75-09-2	< 4	4	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Trichlorofluoromethane	75-69-4	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

#### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 VOCs	SW-846 8260B	1	T150481AA	02/17/2015 16:50	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T150481AA	02/17/2015 16:50	Linda C Pape	1





### Quality Control Summary

Client Name: Kleinfelder Group Number: 1538164

Reported: 02/19/15 at 05:19 PM

eurofins

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank <u>LOO</u>	Report <u>Units</u>	LCS %REC	LCSD %REC	LCS/LCSD <u>Limits</u>	RPD	RPD <u>Max</u>
Batch number: T150481AA	Sample num	ber(s): 77	70200-7770	204				
Benzene	< 1	1.	ug/l	100	102	78-120	3	30
Carbon Tetrachloride	< 1	1.	ug/l	93	95	74-130	2	30
Chlorobenzene	< 1	1.	ug/l	97	99	80-120	1	30
Chloroethane	< 1	1.	ug/l	92	93	56-120	1	30
Chloroform	< 1	1.	ug/l	102	104	80-120	2	30
1,2-Dichlorobenzene	< 5	5.	ug/l	95	100	80-120	5	30
1,1-Dichloroethane	< 1	1.	ug/l	99	103	80-120	4	30
1,2-Dichloroethane	< 1	1.	ug/l	99	103	72-127	3	30
1,1-Dichloroethene	< 1	1.	ug/l	100	107	76-124	6	30
cis-1,2-Dichloroethene	< 1	1.	ug/l	101	104	80-120	3	30
trans-1,2-Dichloroethene	< 1	1.	ug/l	104	106	80-120	2	30
Ethylbenzene	< 1	1.	ug/l	108	110	80-120	2	30
Methyl Tertiary Butyl Ether	< 1	1.	ug/l	90	92	75-120	2	30
Methylene Chloride	< 4	4.	ug/l	101	101	80-120	0	30
Tetrachloroethene	< 1	1.	ug/l	101	101	80-120	0	30
Toluene	< 1	1.	ug/l	104	107	80-120	3	30
1,1,1-Trichloroethane	< 1	1.	ug/l	100	103	66-126	3	30
1,1,2-Trichloroethane	< 1	1.	ug/l	100	100	80-120	0	30
Trichloroethene	< 1	1.	ug/l	102	105	80-120	3	30
Trichlorofluoromethane	< 1	1.	ug/l	80	85	58-135	5	30
Vinyl Chloride	< 1	1.	ug/l	94	99	69-120	5	30
Xylene (Total)	< 1	1.	ug/l	98	101	80-120	3	30

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD <u>Limits</u>	<u>RPD</u>	RPD <u>MAX</u>	BKG Conc	DUP Conc	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: T150481AA	Sample	number(s)	: 7770200	-777020	4 UNSP	K: P773169			
Benzene	106	106	72-134	1	30				
Carbon Tetrachloride	103	106	75-148	2	30				
Chlorobenzene	102	102	87-124	0	30				
Chloroethane	98	97	55-130	1	30				
Chloroform	105	106	81-134	1	30				
1,2-Dichlorobenzene	99	102	84-119	3	30				
1,1-Dichloroethane	105	106	84-129	1	30				
1,2-Dichloroethane	104	104	63-142	0	30				
1,1-Dichloroethene	110	113	79-137	2	30				

- \*- Outside of specification
- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



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### Quality Control Summary

Client Name: Kleinfelder Group Number: 1538164

Reported: 02/19/15 at 05:19 PM

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

	MS	MSD	MS/MSD		RPD	BKG	DUP	DUP	Dup RPD
<u>Analysis Name</u>	%REC	%REC	<u>Limits</u>	RPD	<u>MAX</u>	Conc	Conc	<u>RPD</u>	<u>Max</u>
cis-1,2-Dichloroethene	107	107	80-141	0	30				
trans-1,2-Dichloroethene	112	111	86-131	0	30				
Ethylbenzene	115	116	71-134	1	30				
Methyl Tertiary Butyl Ether	94	94	72-126	0	30				
Methylene Chloride	106	105	78-133	1	30				
Tetrachloroethene	124	137*	80-128	10	30				
Toluene	111	112	80-125	1	30				
1,1,1-Trichloroethane	108	108	69-140	0	30				
1,1,2-Trichloroethane	103	103	71-141	1	30				
Trichloroethene	109	111	88-133	2	30				
Trichlorofluoromethane	92	93	63-163	0	30				
Vinyl Chloride	106	104	66-133	2	30				
Xylene (Total)	105	106	79-125	1	30				

### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 8260 VOCs Batch number: T150481AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene	
7770200	97	100	100	103	
7770201	99	96	102	107	
7770202	98	91	99	106	
7770203	97	92	100	106	
7770204	100	97	100	108	
Blank	97	97	102	106	
LCS	98	97	102	104	
LCSD	99	96	101	105	
MS	96	98	101	104	
MSD	97	98	101	106	
Limits:	80-116	77-113	80-113	78-113	

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

0



For Lancaster Laboratories	use only Acct. #:	
Group #:	Sample #: (	۷
1538/6	4 7770200-04	

Client: Fairfax Pet	troleum	Acct. #:			T		Matrix						Anal	yses R	equeste	ed			For La	b Use	Only
Project Name/#:	Great Falls	PWSID #:			1								Pres	servatio	n Code	s			FSC:		
Project Manager:	Mark C. Steele	P.O. #:	51141-304	775			9 Si		ļ .	Z									SCR#:	***	
	M Bosnell	Quote #:					Potable NPDES												Preservation C	odes	
Name of State where sa	amples were collected	: Virginia			ı				ners	<b>*</b> *	(8260)								H=HCI T=T N=HNO3 B=N S=H2SO4 O=0		eceipt
Sample Identification		Date Collected	Time Collected	Grab	Composite	Soil	Water	Other	Total # of Containers	26140 VPDES List	BTEX + MTBE (8;								Remar	ks	Temperature of samples upon re (if requested)
Int	fluent	2/11/15	1015	Х			Х		3	Х									1		
Air Strip	per Effluent	2/11/15	1018	Х			Х		Ŋ		Х							-	رن	s)e/	
LGAC	1 Effluent	2/11/15	1022	Х			Х		Ç		Х									1	
LGAC	2 Effluent	2/11/15	1028	Х			Х		3		Х										
LGAC	3 Effluent	2/11/15	1033	Х			Х		3	Х											
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			1														<b>†</b>				
<u></u>					7																
					$\dashv$	$\neg$														+	
	<b>*</b>				7															1	
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(Rush TAT is subject to Lanca	-		14011					7	Í	7			adulis	м-	130	2	cichery	1_		a sub E	132
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Phone #:	Fax #:	none rax		,					shed				Date		Time		Received	bv:		· · · · · · · · · · · · · · · · · · ·	Time .
E-mail address:	1 dx #.			-			- 1	1./	u	•		1	2/1-/1	, –	15:4	(1)		,			
Data Package Options	(please circle if required)		SDG Comp	lete?			Rel		shed				Date		Time		Received	bv:		Date	Time
Type I (validation/NJ reg)			Yes N					·		•								•			
Type II (Tier II)	MA MCP CT RCF	,	165 14	U			Reli	inaui	shed	bv:			Date		Time		Received	bv:	$\leftarrow$	Date	Time
Type III (Reduced NJ)		pecific QC (MS/N	ISD/Dun\2	<b>/</b> 00	N	lo		,													
Type IV (CLP SOW)		dicated QC sample an	• •			•0	Rel	inqui	shed	bv:			Date		Time		Received	bv:		Date	Time
Type VI (Raw Data Only)		dicated QC sample an I COC required?		ne volu	ine)											_		. —		2/0/15	
Type VI (Naw Data Offly)		l coc required?					lessed Diles						1		47.050	_ <		Ref	13	(1)	<i>t</i> -

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# **Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
μg	microgram(s)	mg	milligram(s)
mĹ	milliliter(s)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

< less than

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an

as-received basis.

#### Laboratory Data Qualifiers:

B - Analyte detected in the blank

C - Result confirmed by reanalysis

E - Concentration exceeds the calibration range

J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and the < Limit of Quantitation (LOQ or RL)

P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.

U - Analyte was not detected at the value indicated

V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

# Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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### ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 Kleinfelder 550 West C Street, Suite 1200 San Diego CA 92101

February 26, 2015

Project: Fairfax 26140

Submittal Date: 02/21/2015 Group Number: 1540264 PO Number: 51141-304775 State of Sample Origin: VA

Client Sample Description

Lancaster Labs (LL) #

7780856

LGAC 3 Effluent Grab Water

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <a href="http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/">http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/</a>.

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ELECTRONIC	Kleinfelder	Attn: Jennifer Kozak
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ELECTRONIC	Kleinfelder	Attn: Nathan Stevens
COPY TO		
ELECTRONIC	Kleinfelder	Attn: Paxton Wertz
COPY TO		

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Respectfully Submitted,

Amek Carter Specialist

(717) 556-7252



# **Analysis Report**

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Sample Description: LGAC 3 Effluent Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7780856

LL Group # 1540264 Account # 12152

Project Name: Fairfax 26140

Collected: 02/20/2015 14:30 by PW Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 02/21/2015 10:30 Reported: 02/26/2015 09:44

### LGAC3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10945	Benzene	71-43-2	< 1	1	1
10945	Ethylbenzene	100-41-4	< 1	1	1
10945	Methyl Tertiary Butyl	1634-04-4	1	1	1
	Ether				
10945	Toluene	108-88-3	< 1	1	1
10945	Xylene (Total)	1330-20-7	< 1	1	1

### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	UST BTEX, MTBE in Water	SW-846 8260B	1	F150541AA	02/23/2015 15:09	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150541AA	02/23/2015 15:09	Anita M Dale	1



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### Quality Control Summary

Client Name: Kleinfelder Group Number: 1540264

Reported: 02/26/15 at 09:44 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank <u>LOO</u>	Report <u>Units</u>	LCS <u>%REC</u>	LCSD %REC	LCS/LCSD <u>Limits</u>	RPD	RPD <u>Max</u>
Batch number: F150541AA	Sample number	er(s): 778	80856					
Benzene	< 1	1.	ug/l	94		78-120		
Ethylbenzene	< 1	1.	ug/l	94		80-120		
Methyl Tertiary Butyl Ether	< 1	1.	ug/l	96		75-120		
Toluene	< 1	1.	ug/l	96		80-120		
Xylene (Total)	< 1	1.	ug/l	94		80-120		

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS <u>%REC</u>	MSD <u>%REC</u>	MS/MSD <u>Limits</u>	RPD	RPD <u>MAX</u>	BKG <u>Conc</u>	DUP <u>Conc</u>	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: F150541AA	Sample	number(s	): 7780856	UNSPK	: P7775	24			
Benzene	99	99	72-134	0	30				
Ethylbenzene	97	98	71-134	0	30				
Methyl Tertiary Butyl Ether	95	94	72-126	1	30				
Toluene	100	100	80-125	0	30				
Xylene (Total)	97	97	79-125	0	30				

#### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: UST BTEX, MTBE in Water

Batch number: F150541AA

Daccii iia	moci. III				
	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene	
7780856	100	101	104	98	
Blank	99	98	106	97	
LCS	97	103	106	100	
MS	99	100	106	98	
MSD	101	102	107	101	
Limits	80-116	77-113	80-113	78-113	

- \*- Outside of specification
- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



# Analysis Report

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## Quality Control Summary

Client Name: Kleinfelder Group Number: 1540264

Reported: 02/26/15 at 09:44 AM

<sup>\*-</sup> Outside of specification

<sup>(1)</sup> The result for one or both determinations was less than five times the LOQ.

<sup>(2)</sup> The unspiked result was more than four times the spike added.



## Analysis Request/Environmental Services Chain of Custody

or Lancaster Lal	boratories use only	Acct. #: 12152
Group #:	Sample #	
·	Sample # 540 264	7780856

lient: Fairfax Petroleum Acct. #:					Ma	atrix			Analyses Requested									For Lab Use Only		
Project Name/#: Great Falls	PWSID #:											Pres	ervatio	n Code	3			FSC: _		
Project Manager: Mark C. St	eele P.O. #:	51141-30477	75		e e	81			Z									SCR#:		
Sampler: Paxton Wer			•		Potable	NPDES											-	Preservation Co	des	
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Name of State where samples were	collected: Virginia				-	$\perp$		ine										=H2SO4 0=O	her	n rece
Sample Identification	Date Collected		Grab	Soil	_		Other	Total # of Containers	BTEX+MTBE									Remarl		Temperature of samples upon (if requested)
LGAC 3 Effluent	2/20/15	1430	Х			Х		3	Х									<u> 3 L</u>	Jay	TAT
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(Rush TAT is subject to Lancaster Laboratorie:		•				1	4	<u>5h</u>	1			2/20/	75	1645		7779 6				Time
Date results are needed:	27-Feb-15 (3 D	ry)				Reli	riqu	ished	duby:			Date		Time		Received	ı by.		Date	/
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Type I (validation/NJ reg) TX-TRRP-		Yes No	)					.:	J		$/\!\!-$	Data		Time		Received	l by:		Date	Time
Type II (Tier II) MA MCP	CT RCP					Keli	ınqu	iished	a by:			Date		lime		IVECEIVED	i by		Date	1 11116
Type III (Reduced NJ)	State-specific QC (MS/I			No					-1 1	/		Data		Time		Possives	l by:		Date	Time
Type IV (CLP SOW)	(If yes, indicated QC sample a		te volur	ne)		Reli	ınqu	iished	a by:			Date		Time		Received	Ters L			1032
Type VI (Raw Data Only)	Internal COC required?	Yes No							1							1	10134		119	10 12

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# **Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

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umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
μg	microgram(s)	mg	milligram(s)
mĹ	milliliter(s)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

< less than

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an

as-received basis.

#### Laboratory Data Qualifiers:

B - Analyte detected in the blank

C - Result confirmed by reanalysis

E - Concentration exceeds the calibration range

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P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.

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V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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### ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 Kleinfelder 550 West C Street, Suite 1200 San Diego CA 92101

March 12, 2015

**Project: Fairfax 26140** 

Submittal Date: 03/04/2015 Group Number: 1542808 PO Number: 51141-304775 State of Sample Origin: VA

Client Sample Description	<u>Lancaster Labs (LL) #</u>
Influent Grab Water	7792485
Air Stripper Effluent Grab Water	7792486
LGAC1 Effluent Grab Water	7792487
LGAC2 Effluent Grab Water	7792488
LGAC3 Effluent Grab Water	7792489

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <a href="http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/">http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/</a>.

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<b>ELECTRONIC</b>	Kleinfelder	Attn: Venelda Williams
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<b>ELECTRONIC</b>	Kleinfelder	Attn: Jennifer Kozak
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<b>ELECTRONIC</b>	Kleinfelder	Attn: Nathan Stevens
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<b>ELECTRONIC</b>	Kleinfelder	Attn: Paxton Wertz
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Respectfully Submitted,

Amek Carter Specialist

(717) 556-7252



# Analysis Report

Account

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Sample Description: Influent Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7792485 LL Group # 1542808

# 12152

Project Name: Fairfax 26140

Collected: 03/04/2015 10:50 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/04/2015 18:55 Reported: 03/12/2015 11:46

INFGF

CAT No.	Analysis Name		CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW	-846	8260B	ug/l	ug/l	
10335	Benzene		71-43-2	< 2	2	2
10335	Carbon Tetrachloride		56-23-5	< 2	2	2
10335	Chlorobenzene		108-90-7	< 2	2	2
10335	Chloroethane		75-00-3	< 2	2	2
10335	Chloroform		67-66-3	< 2	2	2
10335	1,2-Dichlorobenzene		95-50-1	< 10	10	2
	1,1-Dichloroethane		75-34-3	< 2	2	2
	1,2-Dichloroethane		107-06-2	< 2	2	2
	1,1-Dichloroethene		75-35-4		2	2
10335	cis-1,2-Dichloroethe	ene	156-59-2	87	2	2
10335	trans-1,2-Dichloroether	ne	156-60-5	< 2	2	2
10335	Ethylbenzene		100-41-4	< 2	2	2
10335	Methyl Tertiary Buty	<i>r</i> 1	1634-04-4	4,900	20	20
	Ether					
10335	Methylene Chloride		75-09-2	< 8	8	2
10335	Tetrachloroethene		127-18-4	11	2	2
10335	Toluene		108-88-3	< 2	2	2
10335	1,1,1-Trichloroethane		71-55-6	< 2	2	2
10335	1,1,2-Trichloroethane		79-00-5	< 2	2	2
10335	Trichloroethene		79-01-6	3	2	2
10335	Trichlorofluoromethane		75-69-4	< 2	2	2
10335	Vinyl Chloride		75-01-4	< 2	2	2
10335	Xylene (Total)		1330-20-7	< 2	2	2

### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 VOCs	SW-846 8260B	1	Y150642AA	03/06/2015 08	:28 Stephanie A Selis	3 2
10335	8260 VOCs	SW-846 8260B	1	Y150642AA	03/06/2015 08	:49 Stephanie A Selis	3 20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y150642AA	03/06/2015 08	:28 Stephanie A Selis	3 2
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Y150642AA	03/06/2015 08	·49 Stephanie A Selis	3 20



# Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: Air Stripper Effluent Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7792486

LL Group # 1542808 Account # 12152

Project Name: Fairfax 26140

Collected: 03/04/2015 11:00 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/04/2015 18:55 Reported: 03/12/2015 11:46

### EFFGF

nalysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
olatiles SW-846	8260B	ug/l	ug/l	
enzene	71-43-2	< 1	1	1
thylbenzene	100-41-4	< 1	1	1
ethyl Tertiary Butyl	1634-04-4	410	10	10
ther				
oluene	108-88-3	< 1	1	1
ylene (Total)	1330-20-7	< 1	1	1
t :	colatiles SW-846 enzene chylbenzene ethyl Tertiary Butyl ther coluene	Dlatiles SW-846 8260B enzene 71-43-2 chylbenzene 100-41-4 ethyl Tertiary Butyl 1634-04-4 ther cluene 108-88-3	Dlatiles SW-846 8260B ug/1 enzene 71-43-2 < 1 chylbenzene 100-41-4 < 1 ethyl Tertiary Butyl 1634-04-4 410 ther eluene 108-88-3 < 1	CAS Number Result Quantitation  Clatiles SW-846 8260B ug/l ug/l  Enzene 71-43-2 < 1 1  Chylbenzene 100-41-4 < 1 1  ethyl Tertiary Butyl 1634-04-4 410 10  ther  Class Number Result Quantitation

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs 8260 BTEX, MTBE	SW-846 8260B	1	Y150642AA	03/06/2015 07:24	Stephanie A Selis	1
10335	VOCs 8260 BTEX, MTBE	SW-846 8260B	1	Y150691AA	03/10/2015 13:58	Daniel H Heller	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y150642AA	03/06/2015 07:24	Stephanie A Selis	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Y150691AA	03/10/2015 13:58	Daniel H Heller	10



# **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: LGAC1 Effluent Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7792487

LL Group # 1542808 Account # 12152

Project Name: Fairfax 26140

Collected: 03/04/2015 11:10 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/04/2015 18:55 Reported: 03/12/2015 11:46

### L1EFF

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10335	Benzene	71-43-2	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	Methyl Tertiary Butyl	1634-04-4	2	1	1
	Ether				
10335	Toluene	108-88-3	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT	Analysis Name	Method	Trial#	Batch#	Analysis	Analyst	Dilution
No.					Date and Time		Factor
10335	VOCs 8260 BTEX, MTBE	SW-846 8260B	1	Y150642AA	03/06/2015 07:46	Stephanie A Selis	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y150642AA	03/06/2015 07:46	Stephanie A Selis	1



# Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: LGAC2 Effluent Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7792488

LL Group # 1542808 Account # 12152

Project Name: Fairfax 26140

Collected: 03/04/2015 11:15 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/04/2015 18:55 Reported: 03/12/2015 11:46

### L2EFF

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10335	Benzene	71-43-2	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs 8260 BTEX, MTBE	SW-846 8260B	1	Y150642AA	03/06/2015 08:07	Stephanie A Selis	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y150642AA	03/06/2015 08:07	Stephanie A Selis	1



# Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: LGAC3 Effluent Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7792489

LL Group # 1542808 Account # 12152

Project Name: Fairfax 26140

Collected: 03/04/2015 11:20 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/04/2015 18:55 Reported: 03/12/2015 11:46

### L3EFF

CAT No.	Analysis Name		CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846	8260B	ug/l	ug/l	
10335	Benzene		71-43-2	< 1	1	1
10335	Carbon Tetrachloride	9	56-23-5	< 1	1	1
10335	Chlorobenzene		108-90-7	< 1	1	1
10335	Chloroethane		75-00-3	< 1	1	1
10335	Chloroform		67-66-3	< 1	1	1
10335	1,2-Dichlorobenzene		95-50-1	< 5	5	1
10335	1,1-Dichloroethane		75-34-3	< 1	1	1
10335	1,2-Dichloroethane		107-06-2	< 1	1	1
10335	1,1-Dichloroethene		75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethe	ene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroet	chene	156-60-5	< 1	1	1
10335	Ethylbenzene		100-41-4	< 1	1	1
10335	Methyl Tertiary B	utyl	1634-04-4	3	1	1
	Ether	_				
10335	Methylene Chloride		75-09-2	< 4	4	1
10335	Tetrachloroethene		127-18-4	< 1	1	1
10335	Toluene		108-88-3	< 1	1	1
10335	1,1,1-Trichloroethan	ne	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethan	ne	79-00-5	< 1	1	1
10335	Trichloroethene		79-01-6	< 1	1	1
10335	Trichlorofluorometha	ane	75-69-4	< 1	1	1
10335	Vinyl Chloride		75-01-4	< 1	1	1
10335	Xylene (Total)		1330-20-7	< 1	1	1

### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT	analysis Name Method		Trial#	Batch#	Analysis	Analyst	Dilution
No.					Date and Time		Factor
10335	8260 VOCs	SW-846 8260B	1	Y150681AA	03/09/2015 13:39	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y150681AA	03/09/2015 13:39	Daniel H Heller	1

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# Quality Control Summary

Client Name: Kleinfelder Group Number: 1542808

Reported: 03/12/2015 11:46

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

	Blank	Blank	Report	LCS	LCSD	LCS/LCSD		RPD
Analysis Name	<u>Result</u>	<u>LOO</u>	<u>Units</u>	%REC	<u>%REC</u>	<u>Limits</u>	<u>RPD</u>	<u>Max</u>
Batch number: Y150642AA	Sample nur	mber(s): 77	92485-7792	2488				
Benzene	< 1	1.	uq/l	97	96	78-120	1	30
Carbon Tetrachloride	< 1	1.	ug/l	101	101	74-130	0	30
Chlorobenzene	< 1	1.	uq/l	101	100	80-120	1	30
Chloroethane	< 1	1.	ug/l	107	106	56-120	1	30
Chloroform	< 1	1.	ug/l	103	102	80-120	1	30
1,2-Dichlorobenzene	< 5	5.	uq/l	98	98	80-120	0	30
1,1-Dichloroethane	< 1	1.	ug/l	99	98	80-120	1	30
1,2-Dichloroethane	< 1	1.	ug/l	111	111	72-127	0	30
1,1-Dichloroethene	< 1	1.	ug/l	95	93	76-124	2	30
cis-1,2-Dichloroethene	< 1	1.	uq/l	97	95	80-120	1	30
trans-1,2-Dichloroethene	< 1	1.	ug/l	100	98	80-120	1	30
Ethylbenzene	< 1	1.	ug/l	102	101	80-120	1	30
Methyl Tertiary Butyl Ether	< 1	1.	uq/l	102	103	75-120	1	30
Methylene Chloride	< 4	4.	ug/l	89	89	80-120	0	30
Tetrachloroethene	< 1	1.	uq/l	97	96	80-120	1	30
Toluene	< 1	1.	uq/l	101	100	80-120	1	30
1,1,1-Trichloroethane	< 1	1.	ug/l	90	88	66-126	2	30
1,1,2-Trichloroethane	< 1	1.	uq/l	102	102	80-120	0	30
Trichloroethene	< 1	1.	uq/l	99	99	80-120	1	30
Trichlorofluoromethane	< 1	1.	ug/l	100	100	58-135	0	30
Vinyl Chloride	< 1	1.	ug/l	107	105	69-120	2	30
Xylene (Total)	< 1	1.	ug/l	101	101	80-120	1	30
D-th			00400					
Batch number: Y150681AA		mber(s): 77		0.0	98	E0 100	0	2.0
Benzene Carbon Tetrachloride	< 1 < 1	1.	ug/l	98	98 106	78-120 74-130	0	30
		1.	ug/l	106			-	30
Chlorobenzene	< 1	1.	ug/l	99	98	80-120	1	30
Chloroethane	< 1	1.	ug/l	106	106	56-120	1 0	30
Chloroform	< 1	1.	ug/l	104	103	80-120	-	30
1,2-Dichlorobenzene	< 5	5.	ug/l	96	96	80-120	0	30
1,1-Dichloroethane	< 1	1.	ug/l	105	106	80-120	0	30
1,2-Dichloroethane	< 1	1.	ug/l	112	112	72-127	0	30
1,1-Dichloroethene	< 1	1.	ug/l	104	102	76-124	2	30
cis-1,2-Dichloroethene	< 1	1.	ug/l	98	98	80-120	0	30
trans-1,2-Dichloroethene	< 1	1.	ug/l	104	103	80-120	1	30
Ethylbenzene	< 1	1.	ug/l	99	99	80-120	1	30
Methyl Tertiary Butyl Ether	< 1	1.	ug/l	101	102	75-120	1	30
Methylene Chloride	< 4	4.	ug/l	95	94	80-120	1	30
Tetrachloroethene	< 1	1.	ug/l	98	96	80-120	1	30
Toluene	< 1	1.	ug/l	100	100	80-120	0	30
1,1,1-Trichloroethane	< 1	1.	ug/l	89	88	66-126	2	30
1,1,2-Trichloroethane	< 1	1.	ug/l	99	98	80-120	1	30
Trichloroethene	< 1	1.	ug/l	101	100	80-120	1	30

- \*- Outside of specification
- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



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## Quality Control Summary

Client Name: Kleinfelder Group Number: 1542808

Reported: 03/12/2015 11:46

_	Blank	Blank	Report	LCS	LCSD	LCS/LCSD		RPD
Analysis Name	Result	LOO	Units	%REC	%REC	<u>Limits</u>	RPD	<u>Max</u>
Trichlorofluoromethane	< 1	1.	ug/l	108	106	58-135	2	30
Vinyl Chloride	< 1	1.	ug/l	106	106	69-120	0	30
Xylene (Total)	< 1	1.	ug/l	99	99	80-120	1	30
Datab	Gamm1 a m		200406					

Methyl Tertiary Butyl Ether Sample number(s): 7792486

ug/l 101 75-120

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

MS MSD MS/MSD RPD BKG פנזם DIID Dup RPD Analysis Name %REC %REC <u>Limits</u> RPD <u>MAX</u> Conc Conc RPD Max

Batch number: Y150691AA Sample number(s): 7792486 UNSPK: P795476 Methyl Tertiary Butyl Ether 72-126

# Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 8260 VOCs Batch number: Y150642AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene	
7792485	102	100	103	97	
7792486	103	100	103	97	
7792487	105	103	102	98	
7792488	104	102	101	95	
Blank	103	100	101	98	
LCS	102	103	103	102	
LCSD	102	103	104	103	
Limits:	80-116	77-113	80-113	78-113	

Batch number: Y150681AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene	
7792489	107	102	101	96	
Blank	106	104	101	96	
LCS	103	101	105	103	
LCSD	103	100	105	102	
Limits:	80-116	77-113	80-113	78-113	

#### \*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.





or Lancaster Laborator	ies use only Acct. #: 121	52
Group #:		
151128	of 7792485.	-89

Client: Fairfax Petroleum	Acct. #:					Matrix						Anal	lyses R	equested		For Lab Us	e Only
Project Name/#: Great Falls	 PWSID #:											Pres	servati	on Codes		FSC:	
Project Manager: Mark C. Steele	P.O. #:	51141-3047	775			e Si			Z	/ ×	/×	/				SCR#:	
Sampler: The Bogwell	Quote #:					Potable NPDES					ates					Preservation Codes	
Name of State where samples were collec	ted: Virginia							iners	30)	st	+ Oxygenates					H=HCI T=Thiosulfate N=HNO3 B=NaOH S=H2SO4 O=Other	receipt
Sample Identification	Date Collected	Time Collected		Composite	Soil	Water	Other	Total # of Containers	BTEX/MTBE (8260)	26140 VPDES List	Full List VOCs + Ox					Remarks	Temperature of samples upon ( (if requested)
Influent	3/4/18	1050	Х			X		3		X		ļ			_	1	
Air Stripper Effluent	3/4/15	1100	Х			X		3	X			ļ				Very !	25
LGAC1 Effluent	3 4/15	1110	Х			X		3	Х			<u> </u>				<del>                                     </del>	-
LGAC2 Effluent	3/4/15	1115	Х			X		6	X			-				-	
LGAC3 Effluent	3/4/15	1120	Х			X		3		Х		<b>-</b>		-			
																+	
																4	
Turnaround Time Requested (TAT) (pleas	se circle): <b>N</b> ormal B	ush				Rel	inqu	ished	l by:			Date		Time	Received by:	Date	Time
(Rush TAT is subject to Lancaster Laboratories approv	al and surcharge.)						_	بحر				3/4/1	5	1300	custer post	7 3/4/	
Date results are needed:	•					Rel	inqu	isheg	l by:			Date		Time	Received by:	Date	Time
Rush results requested by (please circle):	Phone Fax	<b>Ę</b> -mail	)			(	10	ole	Mere	4	Ī	140	-	0524	An	3/40	·- 11:5
Phone #: Fax	#:					Re	ingu	Íshec	l by:			Date		Time	Received by:	Date	Time
E-mail address: <u>mcste</u>	ele@kleinfelder.co	<u>m</u>					$\langle \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$				7	4115		iPist-			
Data Package Options (please circle if require	d)	SDG Comp	lete?			Ŕŧ	inqu	ished	l by:			Date		Time	Received by:	Date	Time
Type I (validation/NJ reg) TX-TRRP-13	-	Yes No	0														
Type II (Tier II) MA MCP <u>CT F</u>	RCP					Rel	inqu	ished	l by:			Date	and the state of t	Time	Received by:	Date	Time
Type III (Reduced NJ) Stat	e-specific QC (MS/M	ISD/Dup)? \	es/	١	Vo.										. /		
	s, indicated QC sample an			ıme)		Rel	inqu	ished	l by:			Date		Time	Received by:	Date	
Type VI (Raw Data Only)	rnal COC required?	Yes No													- Core	da 34/1	5 1855

Lancaster Laboratories, Inc. 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 717-656-2300

Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client



# **Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
μg	microgram(s)	mg	milligram(s)
mĹ	milliliter(s)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

< less than

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an

as-received basis.

#### Laboratory Data Qualifiers:

B - Analyte detected in the blank

C - Result confirmed by reanalysis

E - Concentration exceeds the calibration range

J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and the < Limit of Quantitation (LOQ or RL)

P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.

U - Analyte was not detected at the value indicated

V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

# Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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### ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 Kleinfelder 550 West C Street, Suite 1200 San Diego CA 92101

March 27, 2015

**Project: Fairfax 26140** 

Submittal Date: 03/18/2015 Group Number: 1546272 PO Number: 51141-304775 State of Sample Origin: VA

Client Sample Description
LGAC3 Effluent Grab Water

Lancaster Labs (LL) #

7810533

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <a href="http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/">http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/</a>.

Kleinfelder	Attn: Mark Steele
Kleinfelder	Attn: Venelda Williams
Kleinfelder	Attn: Jennifer Kozak
Kleinfelder	Attn: Nathan Stevens
Kleinfelder	Attn: Paxton Wertz

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Respectfully Submitted,

Amek Carter Specialist

(717) 556-7252



# **Analysis Report**

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: LGAC3 Effluent Grab Water

Great Falls, VA

Fairfax Petroleum 26140

LL Sample # WW 7810533 LL Group # 1546272

Account # 12152

Project Name: Fairfax 26140

Collected: 03/17/2015 12:25 by TB Kleinfelder

550 West C Street, Suite 1200

San Diego CA 92101

Submitted: 03/18/2015 17:30 Reported: 03/27/2015 20:54

### EFFL3

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10945	Benzene	71-43-2	< 1	1	1
10945	Ethylbenzene	100-41-4	< 1	1	1
10945	Methyl Tertiary Butyl	1634-04-4	1	1	1
	Ether				
10945	Toluene	108-88-3	< 1	1	1
10945	Xylene (Total)	1330-20-7	< 1	1	1

#### General Sample Comments

Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	UST BTEX, MTBE in Water	SW-846 8260B	1	Z150843AA	03/25/2015 21:1	Amanda K Richards	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z150843AA	03/25/2015 21.1	Amanda K Richards	1



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# Quality Control Summary

Client Name: Kleinfelder Group Number: 1546272

Reported: 03/27/2015 20:54

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

# Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank <u>LOO</u>	Report <u>Units</u>	LCS %REC	LCSD <u>%REC</u>	LCS/LCSD <u>Limits</u>	RPD	RPD <u>Max</u>
Batch number: Z150843AA	Sample nu	mber(s): 78	10533					
Benzene	< 1	1.	ug/l	101	100	78-120	1	30
Ethylbenzene	< 1	1.	ug/l	103	101	80-120	2	30
Methyl Tertiary Butyl Ether	< 1	1.	uq/l	98	97	75-120	1	30
Toluene	< 1	1.	ug/l	103	101	80-120	2	30
Xylene (Total)	< 1	1.	ug/l	104	103	80-120	1	30

## Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: UST BTEX, MTBE in Water

Batch number: Z150843AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7810533	103	100	99	98
Blank	102	98	100	98
LCS	101	99	100	101
LCSD	102	100	100	100
Limits:	80-116	77-113	80-113	78-113

### \*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.





For Lancaster Laboratories use only Acct. #: 17152
Group #: \_\_\_\_\_ Sample #: \_\_\_\_\_\_
1506 272 7810533

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Client: Fairfax Petrole	Retroleum Acct. #:					Matrix			Analyses Requested						For Lab Use Only						
Project Name/#: Gr	reat Falls	PWSID #:											Pres	ervatio	on Code	s			FSC:		
Project Manager: Ma	ark C. Steele	P.O. #:	51141-304	775			e ES			Ž									SCR#:		
Sampler: Tim Bo	well	Quote #:					Potable NPDES											:	Preservation Code		
Name of State where sampl	les were collected:	Virginia							ners	(O)									H=HCI T≕Thio N=HNO3 B=NaO S=H2SO4 O≕Othe	н	eceipt
Sample Identification		Date Collected		Grab	Composite	Soil	Water	Other	Total # of Containers	BTEX/MTBE (8260)						·			Remark	5	Temperature of samples upon r (if requested)
LGAC3 Eff	fluent	3/17/15	1225	Х			Х	5 X							1						
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Data Package Options (please circle if required)  SDG Complete?					1."			. ~ y .								1	[				
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Type III (Reduced NJ)		ic QC (MS/N				<b>1</b> 0	Do.	lingu	ished	l by:	1	·	Date		Time		Pacaiyad	by:		ate	Time
Type IV (CLP SOW) (If yes, indicated QC sample and submit triplecate volume)  Type VI (Raw Data Only) Internal COC required? Yes No			Ke	mqu	isi iet	ı by.			Date		111116		Received	<i>y</i> y.	1 .	( ) [	1730				
Type VI (Raw Data Only)		C required?									`						VW/ S		1/	ני זם	1170

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# **Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
μg	microgram(s)	mg	milligram(s)
mĹ	milliliter(s)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

less than <

greater than >

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Results printed under this heading have been adjusted for moisture content. This increases the analyte weight Dry weight basis

concentration to approximate the value present in a similar sample without moisture. All other results are reported on an

as-received basis.

## Laboratory Data Qualifiers:

B - Analyte detected in the blank

C - Result confirmed by reanalysis

E - Concentration exceeds the calibration range

J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and the < Limit of Quantitation (LOQ or RL)

P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.

U - Analyte was not detected at the value indicated

V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

### Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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